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Grevillea,

A QUARTERLY RECORD OF
CRYPTOGAMIC BOTANY
AND ITS LITERATURE.

EDITED BY M. C. COOKE, M.A., A.L.S.,

*Author of "Handbook of British Fungi," "Illustrations of British
Fungi," "Fungi, their uses," &c., "Rust, Smut, Mildew,
and Mould," "British Fresh Water Algæ,"
"British Desmids," &c., &c.*

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Grevillea,

A QUARTERLY RECORD OF CRYPTOGAMIC BOTANY
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BRITISH PYRENOAMYCETES.

A preliminary list of known species.

By G. MASSEE.

Sub-Ord. PYRENOAMYCETES.

Fam. 1. HYPOCREACEÆ, *De Not.* Simple or composite. Perithecia rather fleshy or waxy, membranaceous, brightly coloured, never carbonaceous. Stroma fleshy or waxy, rarely byssoid. Sporidia mostly hyaline, rarely brown.

Sub-Fam. 1. HYPOCREOIDEÆ.

GEN. 1. **CLAVICEPS**, *Tul.* Stroma vertical, springing from a sclerotium. Sporidia filiform, hyaline.

1. *C. purpurea*, *Fr.*, *Sacc. Syll.* 5005; *Hdbk.* 2324.

On *Secale cereale*. Scotland.

On *Triticum repens*. Cultivated. (Wils.).

On *Anthoxanthum odoratum*.

On *Nardus stricta*.

On *Aira cæspitosa*.

On *Holcus mollis*. Scotland, and cultivated.

On *Arrhenatherum avenaceum*.

On *Glyceria fluitans*. Scotland (Wils.), Maxwell Field;

Burnt Ash Lane. (F. C.)

On *Dactylis glomerata*. Cultivated.

On *Festuca elatior*.

On *Lolium perenne*.

On *Molinia cærulea*. Cultivated. (F. C.)

Ergot on *Triticum saluum*, *Triticum repens*. *Secale cereale*, *Hordeum distichum*, *Nardus stricta*, *Anthoxanthum odoratum*, *Alopecurus pratensis*, *Alopecurus agrestis*, *Phalaris arundinacea*, *Phlæum pratense*, *ira Acæspitosa*, *Aira flexuosa*, *Holcus mollis*, *Holcus lanatus*, *Arrhenatherum avenaceum*, *Poa pratensis*, *Poa annua*, *Glyceria fluitans*, *Dactylis glomerata*, *Festuca elatior*,

Festuca pratensis, *Lolium perenne*, *Lolium temulentum*, *Brachypodium sylvaticum*.

2. *C. microcephala*, Tul., Sacc. Syll. 5006; Hdbk. 2325.
On *Anthoxanthum* and *Holcus lanatus*. Scotland.
On *Phragmites communis*. Cultivated. (C. B. P.)
3. *C. nigricans*, Tul., Sacc. Syll. 5007.
Ergot only found in Britain, on *Eleocharis*. Wandsworth Common.
4. *C. Wilsoni*, Cke., Grer. xii, 77.
On *Glyceria*. Cultivated. Aberdeen. (Wils.)

GEN. 2. **CORDYCEPS**, Fries. Stroma vertical, entomogenous, rarely mycogenous, clavate, sporidia filiform, breaking up into joints, hyaline.

A. ENTOMOGENÆ.

* *Stroma simple, heads rounded.*

1. *C. entomorrhiza* (Dicks.), Sacc. Syll. 5012; Hdbk. 2317.
On dead larvæ and pupæ of moths, underground. Coddington, North Wootton, Castle Howard.
var. gracilis, Grer., Sacc. Syll. 5001; Hdbk. 2318.
On the ground in moist places on larvæ. Scotland.
2. *C. myrmecophila*, Ces., Sacc. Syll. 5010; Hdbk. 2320;
Grer. iii, 126.
On an *Ichneumon*. Leigh Wood.

** *Stroma simple, heads clavate.*

3. *C. sphecephila*, Kl., Sacc. Syll. 5015; Gard. Chron.
Conidia only. (W. G. Smith.)
4. *C. pistillariæformis*, B. & Br., Sacc. Syll. 5019; Hdbk. 2323.
On *Cocci* upon wych elm twigs. Batheaston.
5. *C. militaris*, Linn., Sacc. Syll. 5031; Hdbk. 2319.
On pupæ of moths buried in the ground. Common.

*** *Perithecia scattered, scarcely capitate.*

6. *C. sphingum*, Tul., Sacc. Syll. 5033; Grer. vi, 126.
Conidia on moths. (R. McLachlan.)

B. MYCOGENÆ.

7. *C. ophioglossoides*, Ehr., Sacc. Syll. 5038; Hdbk. 6321.
On *Elaphomyces muricatus*. Local.
8. *C. capitata*, Holms., Sacc. Syll. 5039; Hdbk. 2322.
On *Elaphomyces granulatus*. Local.

GEN. 3. **EPICHLÖE**, Fries. Stroma sessile, effused, usually surrounding the culms of grasses. Sporidia filiform.

1. *E. typhina* (P.), Sacc. Syll. 5057; Hdbk. 2326.
On living grasses. Common.

GEN. 4. **HYPOCREA**, *Fries*. Perithecia immersed in a pulvinate or effused, almost superficial stroma.

A. **PODOCREA**. *Stroma vertically elongated*.

1. *H. alutacea*, *P.*, *Sacc. Syll.* 4882 ; *Hdbk.* 2332.
On the ground. Swanage, Hereford.

B. **EUHYPOCREA**. *Stroma pulvinate, &c., Sporidia didymous*.

* *Sporidia hyaline*.

2. *H. rufa* (*P.*), *Sacc. Syll.* 4834 ; *Hdbk.* 2328.
On branches. Downton, Epping Forest, Weybridge, Glamis.
3. *H. tremelloides*, *Sch.*, *Sacc. Syll.* 4839 ; *Grev.* viii, 104.
On wood. Hereford.
4. *H. rigens*, *Fr.*, *Sacc. Syll.* 4844 ; *Grev.* viii, 104.
On branches. Brandon.
5. *H. contorta*, *Schw.*, *Sacc. Syll.* 4859 ; *Grev.* vii, 77 ; iv, 123.
On oak. Foxley Woods.
6. *H. argillacea*, *Plow.*, *Grev.* xiii, 79.
On rotten wood. Dersingham. (C. B. P.)
7. *H. strobilina*, *Plow.*, *Grev.* xiii, 79.
On cones of spruce fir. Hereford. (F. Renny.)
8. *H. splendens*, *Plow.*, *Grev.* xiii, 79.
On laurel. Leicestershire. (T. Howse.)

** *Sporidia coloured*.

9. *H. gelatinosa*, *Tode.*, *Sacc. Syll.* 4850 ; *Hdbk.* 2327.
On rotten wood. Dinmore, Appin.
10. *H. dacrymycella*, *C. & Pl.*, *Grev.* xii, 100 (= xiii, 79. *viscidula*).
Brandon.
11. *H. aureoviridis*, *Pl. & C.*, *Sacc. Syll.* 4853 ; *Grev.* viii, 104.
On oak. North Wootton.

b. *Stroma effused*.

12. *H. citrina* (*P.*), *Sacc. Syll.* 4875 ; *Hdbk.* 2331.
On ground, &c. Appin.
13. *H. fungicola*, *Karst.* ; *Grev.* viii, 104 ; *Sacc. Syll.* 4876.
On *Polyporus*. Darnaway Forest.
14. *H. delicatula*, *Tul.*, *Sacc. Syll.* 4877 ; *Hdbk.* 2332.
On fir trunk. Wilts, Hereford.
15. *H. lactea*, *Fr.*, *Sacc. Syll.* 4878 ; *Grev.* x, 70.
On *Polyporus medulla-panis*. Castle Rising.
16. *H. farinosa*, *B. & Br.*, *Sacc. Syll.* 4879 ; *Hdbk.* 2354.
On branches. Norths, Chester, Batheaston, Glamis.

d. *Stroma obsolete*.

17. *H. inclusa*, *B. and Br.*, *Sacc. Syll.* 4895 ; *Hdbk.* 2335.
In *Tuber puberulum*. Hanham (Wilts), Bristol.

- D. SELINIA.* *Stroma verrucæform. Sporidia simple, hyaline.*
 18. *H. pulchra* (Wint.), *Sacc. Syll.* 4586; *Grev.* vii, 78; iv, 123.
 On cow dung. Shrewsbury, Terrington.
E. HYPOCREOPSIS. *Stroma lobate. Sporidia uniseptate, hyaline.*
 19. *H. riccioidea* (Bolt.), *Sacc. Syll.* 6173; *Hdbk.* 2329.
 On willow. Halifax, Carlisle, Glamis.
F. BROOMELLA. *Sporidia fusoid, two or more septate.*
 20. *H. vitalbæ*, *B. & Br.*, *Sacc. Syll.* 4987; *Hdbk.* 2330.
 On *Clematis vitalba*. Batheaston.

GEN. 5. **POLYSTIGMA**, *Pers.*—*Stroma* effused, tawny or red, growing on leaves.

1. *P. rubrum*, *Pers.*, *Sacc. Syll.* 4587; *Hdbk.* 2410.
 On living leaves of various species of *Prunus*. Common.
2. *P. fulvum*, *D. C.*, *Sacc. Syll.* 4588; *Hdbk.* 2411.
 On living leaves of *Prunus padus*. Scotland.

Sub.-Fam. II. NECTRIÆ.

GEN. 1. **SPHÆROSTILBE** (*Tul.*).—*Perithecia* as in *Nectria*, but seated at the base, or in company with vertically elongated conidia-bearers.

1. *S. aurantiaca*, *Tul.*, *Sacc. Syll.* 4810; *Grev.* x, 70.
 On elm. Brandon.

GEN. 2. **NECTRIA**, *Fries.*—*Perithecia* free, cæspitose, sometimes seated on conidia-bearing stroma. *Sporidia* oblong.

A. EU-NECTRIELLA. *Sporidia continuous.*

** *Chilonectria.* *Asci polysporous.*

1. *N. cucurbitula*, *Curr.*, *Sacc. Syll.* 4574; *Hdbk.* 2349.
 On branches.

* *Aponectria.*

2. *N. inaurata*, *B. & Br.*, *Sacc. Syll.* 4826; *Hdbk.* 2352.
 On dead holly. Bath, Forden, Shrewsbury.

B. Sporidia uniseptate.

* *Asci octosporous.*

3. *N. cinnabarina*, *Tode.*, *Sacc. Syll.* 4662; *Hdbk.* 2345.
 On dead branches. Common.
4. *N. ribis*, *Tode.*, *Sacc. Syll.* 4663; *Grev.* viii, 105.
 On species of *Ribes*.
5. *N. punicea*, *Kze.*, *Sacc. Syll.* 4664; *Hdbk.* 2347.
 On *Rhamnus frangula*. Highgate, Lynn.
6. *N. sinopica*, *Fr.*, *Sacc. Syll.* 4666; *Hdbk.* 2350.
 On shoots of ivy. King's Cliffe.

7. *N. coccinea*, *P.*, *Sacc. Syll.* 4670 ; *Hdbk.* 2348.
On dead branches.
8. *N. Desmazierii*, *Not.*, *Sacc. Syll.* 4672 ; *Mag. Zool. Bot.* i, 48, t. 3, f. 6.
On box twigs. Apethorpe.
9. *N. ditissima*, *Tul.*, *Sacc. Syll.* 4671 ; *Grev.* viii, 105.
On beech bark.
10. *N. ochracea*, *Grev.*, *Sacc. Syll.* 4689 ; *Hdbk.* 2345.
On beech. Durham, Highgate, near Bath, Scotland.
11. *N. aquifolii*, *Fr.*, *Sacc. Syll.* 4693 ; *Hdbk.* 2351.
On dead holly: Apethorpe, Scarborough.

LEPIDONECTRIA.

12. *N. Ralfsii*, *B. & Br.*, *Sacc. Syll.* 4767 ; *Hdbk.* 2353.
On furze, &c. Penzance, Coed Coch.
13. *N. manmoidea*, *Plow.*, *Sacc. Syll.* 4774 ; *Grev.* vii, 78, iii, 126.
On stumps and dead stems of *Ulex europæus*. North Wootton, Scarborough.

C. CALONECTRIA. Sporidia multiseptate.

14. *N. citrino-aurantia*, *Lac.*, *Sacc. Syll.* 4950 ; *Grev.* vii, 78.
On dead branches of willow.

* * *Sporidia muriform.*

15. *N. Lamyi*, *Desm.*, *Sacc. Syll.* 4990 ; *Grev.* x, 70.
On *Berberis vulgaris*. King's Lynn.

GEN. 3. **HYPOMYCES**, *Fries.*—Subiculum byssoid, velvety, growing on fungi.

* *Peckiella. Sporidia continuos.*

1. *H. viridis*, *A. & S.*, *Sacc. Syll.* 4633 ; *Grev.* x, 47.
On various Agarics, especially *Lactarii*. South Wootton.
2. *H. Tulasneanus*, *Plow.*, *Sacc. Syll.* 4634 ; *Hdbk.* 2339 ; *Grev.* xi, 46.
On species of *Boletus*. Laxton, Mattishall.
3. *H. violaceus*, *Fr.*, *Sacc. Syll.* 4637 ; *Grev.* xi, 49.
On *Æthelium septicum* (*Fuligo varians*). Cawdor Castle.
4. *H. ater*, *Fr.*, *Grev.* xii, 80, xiii, 47.
On small undetermined agarics. Carlisle. (Dr. Carlyle.)

** *En-hypomyces. Sporidia uniseptate.*

A. MYCOGENÆ.

5. *H. asterophorus*, *Tul.*, *Sacc. Syll.* 4611 ; *Grev.* xi, 6.
On *Nyctalis parasitica*. Norfolk.
6. *H. chrysospermus*, *Tul.*, *Sacc. Syll.* 4614 ; *Grev.* xi, 4.
On various species of *Boletus*, &c. Coed Coch, Kew, Forres, N.B.

7. *H. lateritius*, *Fr.*, *Sacc. Syll.* 4615 ; *Hdbk.* 2341 ; *Grev.* xi, 41.
On the hymenium of *Lactarius deliciosus*. Hereford, Coed Coch, Jedburgh.
8. *H. aureonitens*, *Tul.*, *Sacc. Syll.* 4616 ; *Grev.* xi, 49.
On *Stereum hirsutum*. Pwlltyrochon Wood, North Wales.
9. *H. rosellus*, *A. & S.*, *Sacc. Syll.* 4617 ; *Hdbk.* 2338 ; *Grev.* xi, 43.
On decaying fungi, *Stereum hirsutum* most frequently ; also on the ground where fungi have decayed. Not uncommon.
10. *H. Broomeanus*, *Tul.*, *Sacc. Syll.* 4620 ; *Hdbk.* 2340 ; *Grev.* xi, 48.
On *Polyporus annosus*. Batheaston, Castle Rising.
11. *H. ochraceus*, *P.*, *Sacc. Syll.* 4621 ; *Hdbk.* 2336 ; *Grev.* xi, 44.
On species of *Russula*, &c. Scotland.
12. *H. aurantius*, *Pers.*, *Sacc. Syll.* 4622 ; *Hdbk.* 2337 ; *Grev.* xi, 44.
On various species of *Polyporus* and *Agaricus*. King's Lynn, Scarborough, Scotland, King's Cliffe, Bodelwyddan, Twycross.
13. *H. fulgens*, *Fr.*, *Sacc. Syll.* 4623.
On *Polyporus*. Batheaston, Gopsal. (Herb. Berk.)
14. *H. Berkleyanus*, *Plow. & C.*, *Sacc. Syll.* 4625 ; *Grev.* xi, 49.
On dead *Stereum hirsutum*. Downton.
On dead wood covered by some *Corticium*. Sandringham.
15. *H. candicans*, *Plow.*, *Sacc. Syll.* 4626 ; *Grev.* x. 70, xi. 50.
On some *Myxogaster*. Leziate, Bathford Down.
16. *H. torminosus*, *Mont.*, *Sacc. Syll.* 4628 ; *Hdbk.* 2342 ; *Grev.* xi, 42.
On the hymenium of *Lactarius torminosus*. King's Cliffe, Dinmore.

B. TERRIGENÆ, lignicolæ.

17. *H. terrestris*, *Plow. & Boud.*, *Sacc. Syll.* 4624 ; *Grev.* xi, 47.
On the ground near where the conidiiferous agaric has decayed. North Wootton. (C. B. P.)
Conidia most frequently on *Lactarius rufus*.
Species of which the asci are unknown.
18. *H. Linkii*, *Tul.*, *Sacc. Syll.* 4651 ; *Grev.* xi, 50.
Conidia only, on *Agaricus rubescens*.
On the stem of a decaying *Boletus*. North Wootton.
19. *H. cervinus*, *Tul.*, *Sacc. Syll.* 4653 ; *Grev.* xi, 51.
Conidia only, on *Morchella esculenta*. Castle Rising.
On *Peziza acetabulum*.
On *Peziza macropus*. Sufton Court, Hereford.
20. *H. Baryanus*, *Tul.*, *Sacc. Syll.* 4657.
On *Nyctalis parasitica*. Solihull. (W. B. G.)

21. *H. tuberosus*, *Tul.*, *Sacc. Syll.* 4658; *Grev.* xi, 2.
On *Lactarius*. Hereford.
22. *H. miliarius*, *Tul.*, *Sacc. Syll.* 4659; *Grev.* xi, 2.
On *Russula*. Hereford.

GEN. 4. **ELEUTHEROMYCES**, *Eckl.*—Perithecia cylindrically awl-shaped, somewhat diaphanous.

1. *E. subulatus*, *Tode, Sacc. Syll.* 4578; *Hdbk.* 1238.
On hard, blackened *Agarics*. Twycross, &c.
2. *E. longisporus*, *Plow.*, *Grev.* xiii, 78.
On remains of some *Myzogaster*. King's Lynn.

GEN. 5. **BYSSONECTRIA**, *Karst.*—Stroma byssoid, perithecia somewhat superficial, crowded.

A. Sporidia hyaline.

** *Hyphonectria. Sporidia uniseptate.*

1. *B. epigaea*, *Cke.*, *Sacc. Syll.* 4765; *Grev.* viii, 10.
On the ground. Penecuik, N.B.

GEN. 6. **OOMYCES**, *B. & Br.*—Perithecia contained in a polished, coloured sac. Sporidia filiform, hyaline.

1. *O. carneo-albus*, *Lib.*, *Sacc. Syll.* 5004; *Hdbk.* 2343.
On leaves of *Aira cæspitosa*. Spye Park, Batheaston, Carlisle.

GEN. 7. **DIALONECTRIA**, *Sacc.*—Perithecia free, superficial, gregarious or scattered, fleshy, smooth, brightly coloured.

A. NECTRIELLA. Sporidia continuous.

1. *D. furfurella*, *B. & Br.*, *Sacc. Syll.* 4568; *Grev.* vii, 78.
(= *Keithii*, *B. & Br.*)
On dead cabbage. Forbes, N.B.

B. EU-DIALONECTRIA. Sporidia uniseptate, hyaline.

2. *D. sanguinea*, *Fr.*, *Sacc. Syll.* 4721; *Hdbk.* 2360.
On wood, *Hypoxyla*, &c. Common.
3. *D. peziza*, *Tode, Sacc. Syll.* 4757; *Hdbk.* 2358.
On stumps. Not uncommon.
4. *D. dacrymycella*, *Nyl.*, *Sacc. Syll.* 4707; *Grev.* xiii, 78.
On *Angelica* stems. Bristol. (C. B.).
5. *D. Bloxami*, *B.*, *Sacc. Syll.* 4952; *Hdbk.* 2367.
On *Helianthus tuberosus*. Twycross.
6. *D. arenula*, *B. & Br.*, *Sacc. Syll.* 4716; *Hdbk.*
On *Aira cæspitosa*. Batheaston.
7. *D. graminicola*, *B. & Br.*, *Sacc. Syll.* 4717; *Hdbk.* 2366.
On *Aira cæspitosa*. Batheaston.
8. *D. episphaeria*, *Tode, Sacc. Syll.* 4740; *Hdbk.* 2361.
On *Hypoxylu*, etc. Common.

9. *D. Purtoni*, *Grev.*, *Sacc. Syll.* 4741; *Hdbk.* 2362.
On *Valsa abietis*. Rosslyn.
10. *D. lichenicola*, *Ces.*, *Sacc. Syll.* 4745; *Grev.* vii, 78.
On *Peltigera canina*. Lynn.
11. *D. lecanodes*, *Ces.*, *Sacc. Syll.*; *Grev.* vi, 25.
On *Peltigera canina*. Lynn.
12. *D. aurea*, *Grev.*, *Sacc. Syll.* 4750; *Grev.*
On dead holly. Hereford, East Farleigh, Scotland.
13. *D. affinis*, *Grev.*, *Sacc. Syll.* 4751; *Grev.* viii, 9.
On *Ephebe pubescens*. Appin.
14. *D. muscivora*, *B. & Br.*, *Sacc. Syll.* 4961; *Hdbk.* 2364.
On mosses. King's Cliffe.
15. *D. fibricola*, *Plow.*, *Sacc. Syll.* 4756; *Grev.* xiii, 78.
On rotten cord. King's Lynn.

D. CALONECTRIA. Sporidia oblong guttulate.

* *Sporidia 2-5 septate.*

16. *D. Leightoni*, *B. & Br.*, *Sacc. Syll.* 4940; *Grev.* i, 155.
On larch. Yorkshire.
17. *D. platascia*, *B.*, *Sacc. Syll.* 4951; *Hdbk.* 2359.
On touchwood. Rockingham Forest.
18. *D. ochraceo-pallida*, *B.*, *Sacc. Syll.* 4971; *Hdbk.* 2363.
On elm branches. Rockingham Forest, Mossburnford.
19. *D. erubescens*, *Desm.*, *Sacc. Syll.* 4944; *Grev.* x, 70.
On dead holly leaves. Clifton Down.
20. *D. helminthicola*, *B. & Br.*, *Sacc. Syll.* 4968; *Hdbk.* 2368.
Parasitic on a species of *Helminthosporium*. Batheaston,
Forden, Somersetshire.

** *Sporidia 6-10 septate.*

21. *D. Plowrightiana*, *Sacc.*, *Sacc. Syll.* 4925; *Grev.* vii, 78.
On dead stems of *Arctium lappa*. Shrewsbury.

GEN. 8. **LASIONECTRIA**, *Sacc.*—Perithecia hairy.

a. *Notarisiella. Sporidia continuous.*

1. *L. rousselliana*, *M.*, *Sacc. Syll.* 4570; *Hdbk.* 2369.
On box leaves. Twycross, Dorking, Scotland.

b. *Lasionectria. Sporidia uniseptate.*

2. *L. fulva*, *Berk.*, *Sacc. Syll.* 4570; *Hdbk.* 2369. V.
On box leaves. Milton, Norths.
3. *L. flavida*, *Ca.*, *Sacc. Syll.* 4957; *Hdbk.* 2356.
On decayed stumps. Leigh Wood, Bristol.
On dead holly. Scarborough.
On bramble. Batheaston.
4. *L. funicola*, *Berk.*, *Sacc. Syll.* 4949; *Hdbk.* 2357.
On decayed rope. King's Cliffe.
5. *L. hirta*, *Blox.*, *Sacc. Syll.* 4932; *Hdbk.* 2354.
On old rails. Twycross, Gopsall, Highgate.

GEN. 9. **GIBBERELLA**, Sacc.—Perithecia smooth, superficial, blue or violet.

b. Genuina. Sporidia triseptate.

1. *G. pulicaris*, Fr., Sacc. Syll. 4973 ; Hdbk. 2344.
On elder, fig, willow, laburnum, cabbage, etc. Not uncommon.
2. *G. flacca*, Wallr., Sacc. Syll. 4976 ; Grev. vi, 25.
On branches of elder.
3. *G. Saubinetii*, Mont., Sacc. Syll. 4977.
On herb stems.
4. *G. cyanogena*, Desm., Sacc. Syll. 4978.
On cabbage stalks. Kew Gardens.

Sub-Fam. III. PSEUDONECTRIÆ.

GEN. 1. **MELANOSPORA**, Ca.—Perithecia simple, ostiolum subulately rostrate (or not rostrate), sometimes penicillate at the apex.

A. VITTADINULA. Subiculum none. Perithecia not rostrate. Sporidia continuous, brown.

1. *M. epispheerium*, P. & P., Sacc. Syll. 4591 ; Grev. x, 71.
On *Hypomyces terrestris*. King's Lynn.

B. Perithecia rostrate.

a. Eu-Melanospora. Sporidia continuous.

2. *M. chionea*, Fr., Sacc. Syll. 4594 ; Grev. viii, 105.
On dead leaves of *Pinus sylvestris*. Grantown.
3. *M. Helvellæ*, Cke., Sacc. Syll. 4597 ; Grev. i, 175.
On *Peziza hemispherica*. Eastbourne.
4. *M. vervecina*, Desm., Sacc. Syll. 4595 ; Grev. viii, 105.
On rotten wood. Wiltshire, Clunhill.
5. *M. caprina*, Fr., Sacc. Syll. 4599 ; Hdbk. 2786.
On bark and twigs. Glamis, Carlisle.
6. *M. Zobelii*, Ca., Sacc. Syll. 4601 ; Hdbk. 2787.
On the hymenium of *Peziza sepulta*. (F.C.)
On truffles.
7. *M. parasitica*, Tul., Sacc. Syll. 4606 ; Grev. x, 71.
Parasitic on *Cordyceps militaris*. North Wootton.

GEN. 2. **ACROSPERMUM**, Tode.—Perithecia elongated or clavate, fleshy, or becoming horny. Sporidia filiform.

b. Eu-Acrospermum. Perithecia scattered.

1. *A. compressum*, Tode, Sacc. Syll. 5863 ; Hdbk. 1257.
On dead stems of umbellifers and other herbaceous plants.
King's Cliffe, Forden, Scotland, etc.
2. *A. graminum*, Lib., Sacc. Syll. 5865 ; Hdbk. 1258.
On dead grasses. Dartford.

INDEX LICHENUM BRITANNICORUM.

(According to the most recent Nylanderian Arrangement.)

By THE REV. J. M. CROMBIE, F.L.S.

PART I.

FAMILY I. EPHEBACEI, Nyl.

Tribe I. **SIROSIPHEI**, Nyl.*Genus I. GONIONEMA, Nyl.*

- Sp. 1 *G. velutinum* (*Ach.*), *Nyl.*
 2 *G. compactum* (*Ag.*), *Nyl.*

Genus II. SPILONEMA, Born.

- Sp. 1 *Sp. paradoxum, Born.*
 2 *Sp. revertens, Nyl.*
 3 *Sp. Scoticum, Nyl.*

Tribe II. **PYRENOPSEI**, Nyl.*Genus I. EUOPSIS, Nyl.*

- Sp. 1 *Eu. hæmalea* (*Smmrf.*), *Nyl.*
 2 *Eu. granatina* (*Smmrf.*), *Nyl.*

Genus II. PYRENOPSIS, Nyl.

- Sp. 1 *P. hæmatopis* (*Smmrf.*), *Nyl.*
 2 *P. fuscata*, *Nyl.*
 3 *P. subareolata, Nyl.*
 4 *P. phylliscella, Nyl.*
 5 *P. homœopsis, Nyl.*
 6 *P. furfurea, Nyl.*

Tribe III. **HOMOPSIDEI**, Nyl.Sub Tribe I. **Ephebei**, Nyl.*Genus I. EPHEBE, Nyl.*

- Sp. 1 *E. pubescens* (*L.*), *Nyl.*

Genus II. EPHEBEIA, Nyl.

- Sp. 1 *E. hispidula* (*Ach.*), *Nyl.*
 * *E. Martindalei, Cromb.*

Tribe IV. **MAGMOPSEI**, Nyl.*Genus I. MAOMOPSIS.*

- Sp. 1 *M. argilospila, Nyl.*

FAMILY II. COLLEMACEI, *Nyl.*Tribe I. **LICHINEI**, *Nyl.**Genus I. LICHINA*, *Ag.*

- Sp. 1 *L. pygmaea* (*Lghft.*), *Ag.*
 2 *L. confinis* (*Ach.*), *Ag.*

Genus II. LICHINIZA, *Nyl.*

- Sp. 1 *L. Kenmorensis* (*Holl.*), *Nyl.*

Genus III. PTERYGIUM, *Nyl.*

- Sp. 1 *Pt. pannariellum*, *Nyl.*
 2 *Pt. Lismorensis*, *Cromb.*

Genus IV. LEPTOGIDIUM, *Nyl.*

- Sp. 1 *L. dendriscum*, *Nyl.*

Tribe II. **COLLEMEI**, *Nyl.**Genus I. SYNALISSA* (*Fr.*), *Nyl.*

- Sp. 1 *S. symphorea* (*DC.*), *Nyl.*
 2 *S. intricata* (*Arn.*), *Nyl.*

Genus II. SCHIZOMA, *Nyl.*

- Sp. 1 *S. lichinodeum*, *Nyl.*

Genus III. COLLEMA (*Ach.*), *Nyl.*A *Physma*, *Mass.*

- Sp. 1 *C. chalazanum*, *Ach.*
 2 *C. chalazanodes*, *Nyl.*
 3 *C. myriococcum*, *Ach.*
 4 *C. confertum* (*Ach.*), *Nyl.*
 B. *Encollema*, *Cromb.*

a *Stirps, C. terrulenti.*

- 5 *C. terrulentum*, *Nyl.*

b *Stirps, C. verruciformis.*

- 6 *C. ceraniscum*, *Nyl.*

c *Stirps, C. auriculati.*

- 7 *C. auriculatum*, *Hffm.*

- * *C. granosum* (*Wulf.*), *Nyl.*

- 8 *C. furvum*, *Ach.*

f. 1, *tumæforme*, *Ach.*

- 9 *C. flaccidum*, *Ach.*

d *Stirps, C. pulposi.*

- 10 *C. pulposum* (*Bernh.*), *Ach.*

f. 1, *compactum*, *Ach.*β. *pulposulum*, *Nyl.*

- 11 *C. tenax* (*Sw.*), *Ach.*

β. *coronatum*, *Kbr.*

- 12 *C. glaucescens*, *Hffm.*

- 13 *C. crispum* (*Huds.*), *Ach.*
 * *C. ceranoides* (*Borr.*), *Nyl.*
 f. 1, *cristatulum*, *Nyl.*
 14 *C. concinnum*, *Flot.*
 15 *C. cheileum*, *Ach.*
 f. 1, *nudum* (*Schær.*), *Nyl.*
 f. 2, *monocarpon* (*Duf.*), *Nyl.*
 e *Stirps*, *C. melæni.*
 16 *C. granuliferum*, *Nyl.*
 17 *C. melænum*, *Ach.*
 f. 1, *marginale* (*Huds.*), *Ach.*
 2, *jacobæifolium* (*Schrank.*), *Ach.*
 3, *gyrosum*, *Ach.*
 * *C. hypergenum*, *Nyl.*
 18 *C. cristatum* (*L.*), *Schær.*
 19 *C. polycarpon* (*Schær.*), *Kbr.*
 20 *C. Laureri* (*Fr.*, *Kbr.*).
 C. Synechoblastus (*Trevis.*).
 21 *C. nigrescens* (*Huds.*), *Ach.*
 22 *C. aggregatum* (*Ach.*), *Nyl.*
 23 *C. fasciculare* (*L.*), *Ach.*
 24 *C. multipartitum*, *Sm.*
 f. *Stirps incerta.*
 25 *C. isidioides*, *Nyl.*

Genus IV. COLLEMODIUM, *Nyl.*

- Sp. 1 *C. biatorinum*, *Nyl.*
 2 *C. microphyllum* (*Ach.*), *Nyl.*
 3 *C. fragile* (*Tayl.*), *Nyl.*
 4 *C. plicatile* (*Ach.*), *Nyl.*
 f. 1, *minus*, *Cromb.*
 2, *hydrocharum* (*Ach.*), *Nyl.*
 5 *C. fluviatile* (*Huds.*), *Nyl.*
 6 *C. glebulentum*, *Nyl.*
 7 *C. turgidum* (*Ach.*), *Nyl.*
 β. *depressum*, *Cromb.*
 8 *C. Schraderi* (*Bernh.*), *Nyl.*

Genus V. LEPTOGIUM (*Ach.*), *Nyl.*

- * *Homodium*, *Nyl.*
 Sp. 1 *L. rhyarodes*, *Nyl.*
 2 *L. tenuissimum* (*Dicks.*), *Mudd.*
 3 *L. humosum*, *Nyl.*
 4 *L. subtile* (*Schrad.*), *Nyl.*
 f. *latiusculum*, *Nyl.*
 * *L. amphineum* (*Ach.*).
 5 *L. pusillum*, *Nyl.*
 f. *effusum*, *Nyl.*
 6 *L. cretaceum* (*Sm.*), *Nyl.*

- Sp. 7 *L. placodiellum*, *Nyl.*
 8 *L. microscopicum*, *Nyl.*
 9 *L. muscicola* (*Sw.*), *Fr.*
 * *Euleptogium*, *Cromb.*
 10 *L. lacerum* (*Sw.*), *Fr.*
 f. 1, *fimbriatum* (*Hffm.*), *Nyl.*
 * *L. pulvinatum* (*Hffm.*), *Kbr.*
 * *L. lophæum* (*Ach.*), *Kbr.*
 11 *L. sinuatum* (*Huds.*), *Kbr.*
 f. 1, *Pollinieri* (*Del.*), *Nyl.*
 β. *crenatum*, *Nyl.*
 12 *L. palmatum* (*Huds.*), *Mut.*
 13 *L. tremelloides* (*L.*), *Fr.*
 f. 1, *pichneum* (*Ach.*), *Nyl.*
 * *Stephanophoron* (*Flot.*), *Nyl.*
 14 *L. ruginosum* (*Duf.*), *Nyl.*
 * *Mallotium*, *Ach.*
 15 *L. saturninum* (*Dicks.*), *Nyl.*
 16 *L. Hildenbrandii* (*Guror.*), *Nyl.*
 17 *L. Burgessii* (*Lghft.*), *Mudd.*

† *Genus*. *DENDRISCAULON*, *Nyl.*

- Sp. 1 *D. bolacinum* (*Ach.*).

Genus VI. *COLLEMOPSIS*, *Nyl.*

- Sp. 1 *C. Schæreri* (*Mass.*), *Nyl.*
 2 *C. lecanopsoides*, *Nyl.*
 3 *C. furfurella*, *Nyl.*
 4 *C. Arnoldiana* (*Hepp.*), *Nyl.*
 5 *C. oblongans*, *Nyl.*
 6 *C. diffundens*, *Nyl.*
 7 *C. leptogiella*, *Nyl.*

Tribe III. **PYRENIDIEI**, *Nyl.*

Genus I. *PYRENIDIUM*, *Nyl.*

- Sp. 1 *P. actinellum*, *Nyl.*

FAMILY III. LICHENACEI, *Nyl.*

Series I. **Epiconiidei**, *Nyl.*

Tribe I. **CALICIEI**, *Nyl.*

Genus I. *SPHINCTRINA*, (*Fr.*), *Dn.*

- Sp. 1 *S. turbinata* (*Pers.*), *Fr.*
 2 *S. anglica*, *Nyl.*
 3 *S. microcephala* (*Tul.*), *Nyl.*
 4 *S. Kylemoriensis* (*Larb.*), *Cromb.*

Genus II. *CALICIUM* (*Pers.*), *Nyl.*

* *Allodium*, *Nyl.*

- Sp. 1 *C. trichiale*, *Ach.*

- Sp. * *C. cinereum* (*Pers.*), *Nyl.*
 * *C. stemoneum* (*Ach.*), *Nyl.*
 * *Eucalicium*, *Cromb.*
 a *Stirps*, *C. chrysocephali.*
 2 *C. chrysocephalum*, *Turn.*
 f. 1, *melanocephalum*, *Nyl.*
 3 *C. phæocephalum*, *Turn.*
 4 *C. aciculare* (*Sm.*), *Fr.*
 5 *C. arenarium* (*Hampe.*), *Nyl.*
 6 *C. melanophæum*, *Ach.*
 β. *ferrugineum* (*T. & B.*), *Nyl.*
 * *C. brunneolum* (*Ach.*), *Nyl.*
 7 *C. classosporum*, *Nyl.*
 b *Stirps*, *C. trachelini.*
 8 *C. hyperellum*, *Ach.*
 f. 1, *baliolum*, *Ach.*
 2, *viride* (*Pers.*), *Nyl.*
 9 *C. quercinum*, *Pers.*
 * *C. lenticulare* (*Ach.*), *Nyl.*
 f. 1, *chlorodes*, *Nyl.*
 * *C. curtiusculum*, *Nyl.*
 10 *C. pusillum*, *Flk.*
 11 *C. curtum*, *T. & B.*
 12 *C. trachelinum*, *Ach.*
 f. 1 *hemiphæum*, *Nyl.*
 β. *xylonellum* (*Ach.*), *Nyl.*
 13 *C. parietinum*, *Ach.*
 f. 1, *minutellum* (*Ach.*), *Nyl.*
 14 *C. populneum*, *De Brond.*
 15 *C. diploellum*, *Nyl.*
 16 *C. retinens*, *Nyl.*

Genus III. STENOCYBE, Nyl.

- Sp. 1 *St. cuspora*, *Nyl.*
 2 *St. trajecta*, *Nyl.*
 3 *St. byssacea*, *Nyl.*

Genus IV. CONIOCYBE (Ach.), Nyl.

- Sp. 1 *C. furfuracea* (*L.*), *Ach.*
 f. 1, *fulva* (*L.*), *Fr.*
 2 *C. sulphurea* (*Retz.*), *Nyl.*
 3 *C. pallida* (*Pers.*), *Fr.*
 4 *C. hyalinella*, *Nyl.*

Genus V. TRACHYLIA (Fr.), Nyl.

- Sp. 1 *Tr. tigillaris* (*Ach.*), *Fr.*
 2 *Tr. tympanella* (*Ach.*), *Fr.*
 3 *Tr. stigonella* (*Ach.*), *Fr.*

Tribe II. **SPHÆROPHOREI**, *Nyl.**Genus* I. **SPHÆROPHORON** (*Pers.*), *Ach.*

- Sp. 1 *S. compressum*, *Ach.*
 2 *S. coralloides* (*Pers.*), *Ach.*
 f. 1, *congestum*, *Lamy.*
 3 *S. fragile* (*L.*), *Ach.*

Series II. **Cladodei**, *Nyl.*Tribe III. **BÆOMYCETEI**, *Nyl.**Genus* I. **GOMPHILLUS**, *Nyl.*

- Sp. 1 *G. calicioides* (*Del.*), *Nyl.*
 f. 1, *microcephalus* (*Tayl.*), *Nyl.*

Genus II. **BÆOMYCES** (*Pers.*), *Nyl.*A *Eubæomyces*, *Cromb.*

- Sp. 1 *B. rufus* (*Huds.*), *DC.*
 f. 1, *sessilis*, *Nyl.*
 β. *subsquamulosa*, *Nyl.*
 2 *B. placophyllus*, *Ach.*
 3 *B. roseus*, *Pers.*
 B. Icmadophila (*Trevis*)
 4 *B. æruginosus* (*Scop.*), *DC.*

Tribe IV. **PILOPHOREI**, *Nyl.**Genus* I. **PILOPHORON**, *Tuck.*

- Sp. 1 *P. cereolus* (*Ach.*), *Nyl.*
 2 *P. fibula* (*Tuck.*), *Nyl.*
 3 *P. strumaticum*, *Nyl.*

Tribe V. **STEREOCAULEI**, *Nyl.**Genus* I. **STEREOCAULON**, *Schreb.*a *Stirps. St. paschalis.*

- Sp. 1 *St. coralloides*, *Fr.*
 2 *St. Delisei*, *Bor.*
 3 *St. paschale* (*L.*), *Fr.*
 4 *St. evolutum*, *Græwe.*
 5 *St. tomentosum* (*Fr.*), *Th. Fr.*
 6 *St. alpinum* (*Laur.*), *Nyl.*
 7 *St. denudatum*, *Flk.*
 β. *pulvinatum* (*Schær.*), *Fw.*
 b *Stirps, St. condensati.*
 8 *St. condensatum*, *Hffm.*
 f. 1, *condyloideum* (*Ach.*), *Nyl.*
 9 *St. pileatum*, *Ach.*

† *Genus. LEPROCAULON*, *Nyl.*

- Sp. 1 *L. nanum* (*Ach.*), *Nyl.*

(To be continued.)

EXOTIC FUNGI.

(Continued from Vol. XIV,* p. 130.)

AUSTRALASIA.

Polyporus (Spongiosi) hystriculus, Cooke.

Mesopus. Pileo lento, strigoso-hispido, atro-brunneo ($1\frac{1}{2}$ -2 in.) discoideo, convexo. Stipite crasso, abbreviato, centrali. Hymenio pallido. Poris elongatis, majusculis, angulatis, decurrentibus, dissepimentis tenuibus, dentatis laceratisve. Contexto albido.

On stumps. Melbourne, Australia (*Reader*, 13).

Rosellinia (Coniochæta) Colensoi, Cooke.

Peritheciis aggregatis, superficialibus, subgloboseis, setis rigidis fusciscentibus tectis, papillatis, ascis clavatis, octosporis. Sporidiis inordinatis, ellipticis, fuscis, continuis (0.025×0.011 mm.).

On dead wood. New Zealand (*Colenso*, 126).

Very much the habit and appearance of *Sphæria canescens*.

Sphærella Aristoteliae, Cooke.

Maculis epiphyllis, pallidis, orbicularibus, late fusco-cinctis. Peritheciis minutis, immersis, membranaceis, globoso-depressis, perforatis. Ascis clavatis, octosporis. Sporidiis cylindraco-ellipticis, utrinque rotundatis, uniseptatis, vix constrictis ($18-20 \times 4 \mu$).

On living leaves of *Aristotelia racemosa*. New Zealand (*Colenso*, 116).

Sphærella (Sphærulina) assurgens, Cooke.

Peritheciis sparsis, semi-immersis, globosis, demum subliberis, submembranaceis, atris, opacis, pertusis. Ascis clavatis, subsessilibus, apophysatis, octosporis. Sporidiis fusoides, triseptatis, hyalinis ($20-24 \times 4 \mu$).

On living fronds of *Trichomanes venosum*. New Zealand (*Colenso*, 200).

Patellaria torulispora, Phillips.

Crowded. Cups 1-3 mm. sessile, orbicular, hymenium plane, black or brownish black, margin slightly raised; asci cylindrical. Sporidia oblong, uniseptate, brown, readily dividing at the septum ($0.01 \times 0.004-0.005$ mm.) paraphyses filiform, stout, clavate and brown at the apices.

On dead bark. New Zealand (*Colenso*, 144).

The sporidia appear to be 16 in each ascus of subglobose form, owing to the division existing before they leave the ascus.

Berggrenia aurantiaca, Cke. var. *cyclospora*.

Sporidia globose (0.018 mm. diam.).

On the ground. New Zealand (*Colenso*, 266).

Helotium pseudo-ciliatum, *Phillips*.

Scattered. Cups 1-2 mm. broad, sessile, or substipitate, concave, reddish flesh colour, margin fringed with hair-like scales; asci cylindrically-clavate, 8-spored. Sporidia oblong-fusiform or clavate, sometimes bent, $0.2-0.25 \times 0.05-0.06$ mm., paraphyses filiform, slender.

On rotten wood. New Zealand (*Colenso*, 100, 380).

Helotium sordidum, *Phillips*.

Scattered. Cups 1-3 mm. broad, stipitate, concave, becoming plane, dirty brown, margin slightly paler; entire; stem stout, pallid, white and tomentose at the base; asci cylindrical, 8-spored. Sporidia elliptic, $0.07-0.09 \times 0.03-0.04$ mm., paraphyses not seen.

Under rotten wood. New Zealand (*Colenso*, 313).

Allied to *H. fibuliforme*, Fr., but differs in the size and shape of the sporidia.

Peziza (Dasy) nephrodigena, *Phillips*.

Crowded or scattered, sessile, globose, then hemispherical, at first clothed with a slender pubescence, then glabrous, white, waxy, firm, $0.2-0.4$ mm. diam.; hymenium concave, nut-brown, margin inflexed; asci clavate; sporidia oblong-fusiform, rounded at the ends, three septate, constricted at the septa, $0.12-0.15 \times 0.04-0.05$ mm., paraphyses not seen.

On fading fronds of *Nephrodium hispidum*. New Zealand (*Kirk*).

Monilia carbonaria, *Cooke*.

Cespitulis compactis, pulvinatis, ellipticis, vel confluyendo difformibus, aurantiacis, vel aurantio-rubris (1 mm. ad 1 cm. diam.), hyphis repentibus, intricatis, septatis, dissilientibus, vage ramosis, conidiis globoso-ovalibus, primo concatenate, dein liberis, laevibus, hyalinis, rubro-tinctis ($8-12 \mu$ diam.).

On burnt wood and stems. New Zealand (*Kirk*, 282).

Dimerosporium excelsum, *Cooke*.

Maculas radiantes, atras, orbiculatas, crustaceas in foliorum pag. inf. formans. Peritheciis subglobosis, membranaceo-carbonaceis (15 mm. diam.), in centro congestis. Ascis clavatis, sessilibus, basi angustato, octosporis. Sporidiis ellipticis, uni-septatis, medio leniter constrictis, utrinque rotundatis, hyalinis ($12 \times 4 \mu$).

On dead leaves of *Knightia excelsa*. New Zealand (*Colenso*, 213).

Phoma australis, *Cooke*.

Epiphylla, maculis fuscis, ellipticis, brunneo-cinetis, demum confluentibus. Peritheciis atris, punctiformibus, semi-immersis. Sporulis elongato-ellipticis, hyalinis, granulosis ($0.26-0.3 \times 0.06$ mm.) pedicellis brevibus.

On leaves of *Eucalyptus*, Melbourne, No. 8, 12. (*H. Watts*).

NEW GUINEA.

Phyllosticta papuensis, Cooke.

Epiphylla vel amphigena. Peritheciis gregariis, punctiformibus, semi-immersis, atris, nitidis, poro pertusis. Sporulis linearibus, rectis, hyalinis ($10 \times 1 \mu$).

On fading leaves of plant unknown (suffruticose). S. E. New Guinea (Rev. S. Chalmers).

COLUMBIA.

Uredo scabies, Cooke.

Epi-vel hypophylla. Maculis bullatis, irregularibus, lineis nigra cinctis. Pustulis convexis, diu clausis, nitidis, demum fissuratis, in maculis sparsis vel concentricis dispositis. Sporulis ovalibus vel turbinatis, breviter stipitatis, fuscis, episporio asperulo ($0.35-0.4 \times 0.28-0.3$ mm.).

On living leaves of *Vanilla*. Antioquia (C. Patin).

Appears to be very destructive to the *Vanilla* plants, and is regarded as a pest by the cultivators. The habit is peculiar and characteristic, giving the leaves a scabby appearance.

Glæosporium vanilla, Cooke.

Epi-vel hypophyllum. Acervulis gregariis minutis, punctiformibus, epidermide nigricata tectis; conidiis elongato-ellipticis, utrinque rotundatis, rectis, intus granulosis, $0.18-0.25 \times 0.05-0.06$ mm.

On fading leaves of *Vanilla*. Antioquia (C. Patin).

BRITISH SPHÆROPSIDÆÆ.

The following corrections and additions to be made to the list already published:—

Phoma ilicis, Desm. Sacc. Syll. 630.

On holly leaves. Three Shire Oak (W. B. G.).

114. **Phoma porphyrogona**, Cooke. (sub. **Phoma rubella**.)

On stems of *Umbelliferæ*.

This name replaces that of *Phoma rubella*, Cooke, as the *Phoma rubella*, Grove, has priority.

Phoma rubella, Grove. Journ. Bot. xxiii., 162.

On stems of *Carduus*. Three Shire Oak (W. B. G.).

Phoma sanguinolenta, Grove Journ. Bot. xxiii., 162.

On stems of *Carduus*. Three Shire Oak (W. B. G.).

Phoma macrocarpa, Trail. Scot. Naturalist, July, 1886.

On *Mercurialis perennis*. Scotland.

Phoma galacis, Cke. Greer. xiv., 90.

On leaves of *Galax aphylla*. Kew.

Phyllosticta pentestemonis, Cke. *Grer.* XIV., 90.

On leaves of *Pentestemon grandiflorus*. Kew.

Septoria adoxæ, Fekl. *Sacc. Syll.* 2945.

On leaves of *Adoxa*. Forres.

Septoria dianthi, Desm. *Sacc. Syll.* 2796.

On leaves of *Dianthus* (W. B. G.).

Fam. 2. NECTRIOIDÆÆ.

After *Zythia* insert—

GEN. 2. **PSEUDODIPLODIA**, Karst. *Sacc. Syll.* III., 621.

Perithecia superficial, globular or oblong, waxy-fleshy, when moist dark-coloured, soon opening with a wide mouth. Sporules ellipsoid, uniseptate, dilute olivaceous.

Pseudodiplodia corticis, Grove. *Journ. Bot.* XXIV., 197.

On *Acer pseudoplatanus*. Sutton Coldfield (W. B. G.).

Pestalozzia longiseta, Speg. *Sacc. Syll.* 4115.

On *Azalea* leaves. Sutton (W. B. G.).

Pestalozzia fibricola, Grove. *Journ. Bot.* XXIV., 193, t. 266, f. 7.

On *Tilia*. Sutton (W. B. G.).

PRÆCURSORES AD MONOGRAPHIA POLY- PORORUM.

By M. C. COOKE.

(Continued from XIV., p. 115.)

The following diagnoses of species do not appear to have been published, as far as we have been able to ascertain. The types are in the Kew Herbarium :—

54. Polyporus (Lenti) Binnendykei, Kurz. in *Herb. Berk.* 2279.

Gregarius, testaceus. Pileo discoideo, striato, fibroso-lævi ad marginem longe piloso (villosa-ciliato), coriaceo. Stipite tereti, solido, puberulo v tomentosulo, ad basin incrassatum dense tomentoso. Poris regularibus, magnis, hexagonis elongatisve, subquadratis, ore integro vel eroso denticulato.

Ad lignum *Tectonicæ*. Java.

Pileus 1-1½ in.; stem 2 in. long, 1 line thick. Pores more distinctly quadrate than in other species in this section.

94. Polyporus (Melanopodes) glutinifex, Berk. in *Herb. No.* 2418.

Pileo carnosissimo, glutinoso, glabro, dimidiato, centro depresso, postice reticulato-rugoso, fusco, stipite laterali vel excentrico, abbreviato, æquali, vel deorsum attenuato, basi nigricante, contextu

albido. Tubulis elongatis ($\frac{1}{2}$ centim.); poris majusculis, irregularibus, angulatis (0.5-1 mm.), concoloribus.

Ad truncos (?). Mauritius.

Pileus 3 in. broad; stem about 2 in. long, $\frac{1}{2}$ in. thick. Whole plant glutinous when fresh.

182. Polyporus (Molli) sordidus, Cooke.

Pileo carnosio-molli, firmo, pulvinato, postice attenuato, subtiliter velutino, sordide fuligineo, circa marginem glabrescente, contextu albo, subzonato, tubulis mediis (5 mm. long), poris albis, inæqualibus, angulatis (2.5-5 mm.) dissepimentis tenuibus, integris.

Ad truncos. United States (J. B. Ellis, 3796).

Pileus $1\frac{1}{2}$ -2 in. diam; 1 in., or more, thick behind, sometimes sparsely imbricated. margin a little curved inwards.

221. Polyporus (Molli) argentatus, Cooke.

Pileo e carnosio-lento coriaceo, applanato, conchiformi, lævi vel papillato, leniter sericeo, antice albo; postice cinereo-fusco; margine subacuto, sæpe albido, leniter sulcato. Carne albo. Poris albis æqualibus, rotundatis, mediis, dissepimentis incrassatis.—*P. Palliseri*, Grev. x. 98 (non Berk.).

Ad truncos. Victoria, Queensland.

Pileus 2-3 unc. latus, $\frac{1}{2}$ unc. crass.

251. Polyporus (Dichroi) Curreyanus, Berk. in Herb. No. 2820.

Effuso-reflexus, carnosio-lentus, subtiliter villosus, pallidus, azonus; poris mediis, rotundis, curtis, nigrescentibus, sæpe hinc illic obsoletis ($\frac{1}{4}$ mm.).

Ad truncos. New Zealand.

Differs from *P. adustus* in becoming quite black.

280. Polyporus (Hispidi) spiculiferus, Cooke.

Pileo carnosio, aquose-molli subpulvinato (1-2 in.) fuligineo-nigrescente, lævi, sicco ruguloso, undique spiculis obtusis sparsis erectis ornato: carne pallido, tubulis elongatis (5-7 mm.), poris minutis, subæqualibus, dissepimentis tenuibus.

Ad truncos. North Gipps Land, Australia (Tisdall and Webb).

A very characteristic and singular species, somewhat resembling *Hydnum gelatinosum* in appearance.

288. Polyporus (Hispidi) Hobsoni, Berk. in Herb. 3987.

Pileo spongioso, molli, subpulvinato, brevi, albido, pallescente scruposo tomentoso, obtusi, contextu fibroso, pallido. Hymenio convexo, concolori. Poris magnis, angulatis (1-1 $\frac{1}{2}$ mm.); postice decurrentibus, dissepimentis tenuibus.—*Trametes Hobsoni*, Berk. in Herb. 3987.

Ad ligno emortuo. India (Bombay).

Pileus 1-1 $\frac{1}{2}$ in., and nearly as thick, irregular and deformed.

334. Polyporus (Lignescenti) Venezuelæ, Berk. & Curt.

Fusco-cervinus, subimbricatus. Pileo suberoso, dimidiato, convexo, subtiliter velutino, plerumque circiter marginem glabrato, azono, postice tuberculoso et obscuriori, margine acuto, hymenio

concavo, contextuque cervino pallido. Poris æqualibus, rotundis (0.2 mm.), dissepimentis rigidis.—*Herb. Berk.* No. 2694.

Ad truncos. Venezuela, Guiana.

Pileus 2-3 in. broad, somewhat like *P. plebius*, but darker, more tuberculose, and with larger pores.

355. *Fomes (Mes.) pullatus*, Berk.

Pileo orbiculari, rugoso, sulcato-zonato, primum glauco-albo, subtiliter velutino, demum brunneo; contextu molli, *umbrino*, hymenio plano, nigro, poris parvis subhexagonis, $\frac{1}{80}$, stipite elongato, irregulari, pulverulento.—*Polyporus pullatus*, Berk. in *Herb.* 2340.

Ad terram. Hong-Kong.

Pileus $3\frac{1}{2}$ in.; stem 5 in. \times $\frac{1}{2}$ in. thick.

395. *Fomes (Pleux) regulicolor*, Berk.

Pileo reniformi, convexo, sericeo, laevi, subzonato, purpureo-fusco, margine obscuriori, subacuto. Stipite laterali, ascendente, contorto vel difformi, velutino, fusco. Hymenio fusco. Poris æqualibus, minutis, rotundis ($\frac{1}{8}$ mm.).—*Polyporus regulicolor*, Berk. in *Herb.* No. 2420.

On decaying roots. Cuba (944).

Pileus 1-1 $\frac{1}{2}$ in. broad; stem 3 in. long, $\frac{1}{4}$ in. thick, slightly attenuated upwards.

500. *Fomes (Impoliti) contrarius*, Berk. & Curt.

Pileo subzonato, vertice affixo, vel subimbricato (3-5 unc. lat.) brunneo, primo ochraceo, dein obscuriori, concentricè leniter sulcato-depresso, tenui, rigido, tomentoso, demum glabrescente; contextu tenui, lignicolori, fibroso-radiato. Tubulis contextu æqualibus. Poris minutis, regularibus, rotundatis ($\frac{1}{5}$ mm.), hymenio albo, demum argenteo-griseo.—*Herb. Berk.* No. 2634.

Ad truncos. Cuba (938, 946).

More tomentose and zoned than *Fomes hemileucus*, B.

450. *Fomes (Fomentarii) badius*, Berk. in *Herb. Kew.*

Pileo lignoso, pulvinato, crasso, 2-3-ies, concentricè sulcato, glabro, crustaceo-laccato, intus rigido, badio-ferrugineo, margine rotundato, pallidiore, tubulis elongatis, compactis, stratosi, poris æqualibus, rotundato-angulatis ($\frac{1}{3}$ mm. diam.)

Ad truncos. Arctic America (Dr. Richardson).

It is doubtful whether this can be maintained as a distinct species.

514. *Fomes (Impoliti) caryophylleus*, Cke.

Totus rufo-brunneus, caryophyllaceus. Pileo suberoso, conchato, subtenui, leniter concentricè sulcato, velutino, intus concolori. Hymenio concavo, margine acuto; poris regulariter rotundatis, minutis ($\frac{1}{5}$ mm. diam.).

Ad truncos. Brazil (Glaziou, 14432).

528. *Fomes (Impoliti) Curreyi*, Berk. in *Herb.*

Pileo rigido, suberoso-coriaceo, dimidiato, reniformi, radiato-strigoso, subscruposo, brunneo, concentricè zonis elevatis rugoso, contextu fusco. Hymenio tabacino, poris rotundatis, regularibus ($\frac{1}{4}$ mm. diam.), dissepimentis crassiusculis.

Polyporus xerophyllaceus, Curr. Linn. Trans., Ser. 2, Vol. i, p. 120 (not Berk.).

Ad truncos. Andaman Islands, Perak, Australia.

Without the numerous dark, concentric zones of *P. xerophyllaceus*, Berk.; thicker, and of a more tawny colour. Pores twice as large, and habit coarser, and very different.

552. Fomes (Lævigati) oblinitus, Berk. Herb. Kew.

Pileo suberoso-lignoso, convexo-applanato, reniformi, glabro, sublævi; zonis inconspicuis concentricis variegato, rufo-brunneo; margine obtuso, subtus sterili, contextu ligni-colori; poris minutis, subrotundis, æqualibus ($\frac{1}{5}$ mm. diam.), ochraceo-pallidis.

Ad truncos. Mauritius, Australia.

Pileus 2-3 in. diam., $\frac{1}{2}$ - $\frac{3}{4}$ in. thick behind, sometimes almost lacate.

558. Fomes (Lævigati) semi-laccatus, Berk. in Herb.

= *Polyporus zonalis*, var. *semi-laccatus*, Berk. in *Linnean Journal*, Vol. XVI., p. 46.

569. Fomes (Resup.) tropicalis, Cke. Grev. XIII. 32.

Effusus, crassus, induratus (10-20 unc. long, 3-4 unc. lat.); margine atro, sterili, contextu fusco. Hymenio pallido, poris obliquis, plerumque stratis, regularibus, rotundatis ($\frac{1}{4}$ - $\frac{1}{5}$ mm. diam.), dissepimentis crassiusculis, rigidis.

On logs. Demerara.

Resembling some forms of *Fomes obliquus*, often one inch in thickness, and extending to three or four feet in length.

604. Polystictus (Disci) siennæcolor, Berk.

Pileo coriaceo, plano, zonato-suleato, rufo-brunneo (siennæcolori), glabro. Stipite brevissimo, laterali, discoideo, concolori. Poris minutissimis, rotundis, punctiformibus, pallidis.—*Polyporus siennæcolor*, Berk. in Herb. 2379.*

Ad truncos. Ceylon, Brazil.

About the same size as *P. flabelliformis*, but smooth and of one colour.

620. Polystictus (Disci) caryophyllaceus, Berk. & Curt.

Pileo membranaceo, applanato, cuneiformi, postice in stipitem attenuato, lævi, glabro, caryophyllaceo vel purpureo-atro, margine acuto, serrulato, pallidiore. Stipite tenui, fusco, cylindrico, ad basim disciformi. Poris curtis, æqualibus, subrotundis, prope marginem obsoletis.—*Polyporus caryophyllaceus*, B. & C. in Herb. No. 2407.

Ad truncos. Venezuela.

A small species, but little exceeding an inch in length, of which the stem occupies one-third.

675. Polystictus (Prolif.) Kurzianus, Cooke.

Pileo ochraceo-albo, membranaceo-coriaceo, conchiformi, tenui, reniformi, convexo, postice imbricato, pubescente, glabrescente, zonis concentricis angustis obscurioribus notato, stipite brevissimo, disciformi. Hymenio contextuque concolori. Poris irregularibus,

angulatis, acie acutis, dentatis ($\frac{1}{4}$ mm. lat., $\frac{1}{2}$ mm. long).—*Polyporus submembranaceus*, Berk. in Herb. No. 2796.

Ad truncos. Java.

Resembling *P. Nilgherrensis*, M.

683. *Polystictus (Prolificantes) exiguis*, Cooke.

Pusillus, pileo membranaceo, triquetro, pallido cervino, postice in stipite brevi, tenni (vel obsoleto) producti, supra radiato fibroso-hirsuto; margine tenui, inciso-lobato, hymenio albo, tubulis elongatis, poris rotundis, aequalibus, dissepimentis tennibus, integris, sæpe dentatis.

Amongst moss on stumps. New Zealand.

Pileus 3-5 mm., scarcely more; stem sometimes 2-3 mm., sometimes none; pores $\frac{1}{6}$ mm.

689. *Polystictus (Prolif.) nebularis*, Cooke.

Pileo coriaceo, tenui, reniformi vel conchiformi, effuso-reflexo, e pubescente sericeo griseo, zonato, zonis fuscis cæruleisque alternatis, contextu griseo, poris curtis, angulatis, aequalibus ($\frac{1}{3}$ mm.), concoloribus, dissepimentis tenuibus.—*Polyporus (Ino.) nebularis*, Cooke in Herb. Kewensis.

Ad truncos. Brazil (Glazion 14435).

700. *Polystictus (Funales) Fergussoni*, Berk.

Pileo pulvinato, spongioso, strigoso, umbrino, contextu radiante, fibroso, concolori. Hymenio pallido umbrino, subplano, poris rotundatis (0.3 mm.), aequalibus, dissepimentis rigidis, subacutis.—*Trametes Fergussoni*, Berk. in Herb. 3016.

Ad truncos. Natal.

Pileus 2-lin., very obscurely zoned.

759. *Polystictus (Stuposi) Ecklonii*, Berk.

Pileo coriaceo-stuposo, tenui, effuso-reflexo, sub-reniformi, tabacino, azono, strigoso-hirsuto, margine acuto, hymenio contextuque concolori. Poris curtis, magnis ($\frac{1}{2}$ mm.), subrotundatis, acie acutis, denticulatis.—*Polyporus Ecklonii*, Berk. in Herb. No. 2697.

Ad ramulos. South Africa (Ecklon and Zeyher).

Pileus 1-2 inches broad, thin and flexible, clove-brown.

774. *Polystictus (Coriacei) rufopictus*, B. & C.

Pileo coriaceo, subtenui, rigido, applanato, lævigato, nitido, flavido-fusco, primo radiato-strigoso sericeove, zonis angustis concentricis rufis variegato, contextu hymenioque pallido. Poris minutissimis, rotundatis, aequalibus, integris ($\frac{1}{6}$ mm.).—*Polyporus rufopictus*, B. & Curt. Herb. No. 2755.

Ad ramulos. Cuba (No. 940).

Resembling superficially some forms of *P. versicolor*, but hymenium darker, and pores very much smaller.

854. *Polystictus (Scortei) cupreo-vinosus*, Berk. in Herb. No. 2720.

Ad truncos. Panure (Spruce).

We find it impossible to separate this, even as a variety, from *P. cupreo-roseus*. It is probable that the name originated in a

mere slip of the pen, as the species was not described with the rest of Spruce's Amazonian Fungi.

864. Polystictus (Lutescentes) neaniscus, Berk.

Pileo coriaceo, tenui, rigido, velutino, applanato-depresso, reniformi, brunneo, zonis concentricis obscurioribus vel purpureis variegato, contextu porisque minutis, rotundis ($\frac{1}{2}$ mm.), pallide fuscis.—*Polyporus neaniscus*, Berk. in Herb. Kewensis.

Ad truncos. Locality unknown.

Size and habit of *P. versicolor*.

866. Polystictus (Lutes.) Gerardi, Berk. & Cooke.

Pileo suberoso-coriaceo, plano, effuso-reflexo, subvelutino, gilvo, leniter concentricè sulcato, margine acuto, contextu porisque subrotundis, demum angulatis, æqualibus ($\frac{1}{2}$ mm.), fusco-flavidis, dissepimentis tenuibus.—*Polyporus Gerardi*, Berk. & Cooke in Herb. No. 2780.

Ad truncos. Amazons (Gerard, 181).

Suspiciously resembling some forms of *P. occidentalis*, of which it is probably a variety.

886. Polystictus (Lutes.) purpureo-fuscus, Cooke.

Purpureo-fuscus. Pileo dimidiato (3-4 unc.) coriaceo, concentricè sulcato, nitido, glabrato, margine tenui, contextu fibroso-spongioso, olivaceo-fusco, poris regularibus, rotundatis, minutissimis, rigidis. olivaceo-fuscis.

On logs of *Carya*. S. Carolina, U.S. (Rav. 3034).

945. Polystictus (Subresup.) placentæformis, Berk.

Pileo discoideo (1 unc.), margine reflexo, fusco, strigoso. Poris majusculis ($\frac{1}{2}$ -1 mm. diam.), angulatis irregularibus, plerumque acie dentatis, pallidis.—*Polyporus placentæformis*, Berk. in Herb. No. 2945.

Ad ramulos Populos. Carlton, British North America, 1858.

966. Poria (Moll.) hypolateritia, Berk.

Effusa, mollis, albido-pallida, irregularis, substrato lateritio oriunda; poris subæqualibus, minutis, rotundatis, dissepimentis tenuibus.—*Polyporus hypolateritius*, Berk. in Herb. No. 2856.

Ad ligno. India.

974. Poria (Moll.) fuscomarginata, Berk.

Orbicularis, elliptica vel confluens, adnata, ochraceo-pallida, margine tenui, membranaceo, sterili, fusco, poris minutis, rotundatis, æqualibus, centro tubulis elongatis, peripherico curtissimis, dein obsoletis, dissepimentis tenuibus.—*Polyporus fuscomarginatus*, Berk. in Herb. No. 2857.

Ad ligno. United States (Rhode Island).

981. Poria (Moll.) phlebixformis, Berk.

Orbicularis, arcte adnatus, aurantius, sicco aurantio-fulvus (circ. 1 unc.), margine radiato, tenui, striato, sterili; poris subrotundatis, minimis, dissepimentis tenuibus.—*Polyporus phlebixformis*, Berk. in Herb. No. 2833.

Ad ligno mucido. Cuba (939)

982. *Poria* (Moll.) *tegillaris*, Berk.

Effusa, indeterminata, tenuissima, flavo-fuscescens, substrato obsoleto; poris æqualibus, rotundatis, minimis, dissepimentis tenuibus.—*Polyporus tegillaris*, Berk. in Herb. No. 2855.

Ad ligno. Carolina, U.S., No. 4769.

Reduced to a mere porous stratum following the inequalities of the wood.

1001. *Poria* (Moll.) *Salleana*, Berk.

Effusus, membranaceus, margine pallido, lanoso-fibroso, sterili, hymenio fumoso-fuligineo, vel cinereo, poris brevibus, rotundato-angulatis, subæqualibus, minimis, dissepimentis tenuibus, integris.—*Polyporus Salleanus*, Berk. in Herb. No. 2826.

On charred wood. Cordova (Sallé).

1007. *Poria* (Moll.) *gallogrisea*, Berk.

Effusa, tenuis, indeterminata, griseo-cinerea, margine tenuiore, arcte adnato, pallidiore, subtomentoso, poris majusculis, rotundato-angulatis, dissepimentis acutis, integris. *Polyporus gallogriseus*, Berk. in Herb. No. 2863.

Ad ligno carioso. India (Neilgherries).

1022. *Poria* (Moll.) *Carteri*, Berk.

Ferruginosus, effusus, tenuissimus, lævis, margine vix strigoso, tubulis curtis, poris punctiformibus, rotundatis, æqualibus, minutissimis, dissepimentis crassiusculis.—*Polyporus Carteri*, Berk. in Herb. No. 2806.

Ad truncos. Bombay, 1862 (H. J. Carter).

Pores much smaller than any other of the ferruginous species.

1025. *Poria* (Moll.) *geogena*, Berk. & Curt.

Effusus, tenuis, mollis, irregularibus, pallidus, demum umbrinus, immarginatus, poris minutissimis, vix visibilis, rotundatis, dissepimentis tenuibus.—*Polyporus geogenus*, B. & C. in Herb. Berk. 2827.

On naked ground. Venezuela.

Pores scarce visible under a lens.

1027. *Poria* (Moll.) *rufitincta*, B. & C. in Herb. Kew.

Ad truncos. Cuba.

Never described. Does not appear to differ from *P. ferruginosus* except in the minute, regular, round pores.

1039. *Poria* (Vapor.) *pinguedinea* (Gaill).

Polyporus (Res.) *pinguedineus*, Gaill in Herb. Desm.; in Herb. Berk., ex Desmazières, No. 2888. *Polyporus heteroporus*, Pers. in Litt.

Ad truncos.

We fail to find any description of this. It has large, very irregular, often oblique pores, and is wholly whitish.

1041. *Poria* (Vapor.) *flavipora*, B. & Curt.

Effusa, indeterminata, tenuis, alutaceo, v. ochraceo-flavida, margine radiante, tenuiore, albido; poris inæqualibus, minimis, angulatis, confluentibusque, dissepimentis tenuibus, acutis.—*Polyporus flaviporus*, Berk. & Curt. in Herb. Berk. No. 2839.

Ad cortices, ligno, &c. Venezuela.

Appearance of very thin forms of *P. vaporarius*.

1047. *Poria* (Vapor.) *auricoma*, Lev.

Polyporus auricomus, Lev. in Herb. Berk. 2838.

Ad cortice. Marquesas.

We find no description of this. It is very like *P. aneirinus*, but specimen too small and imperfect for diagnosis.

1051. *Poria* (Vapor.) *membranicincta*, Berk.

Effusa, tenuis, ochraceo-pallida, strato membranaceo pallidiore enata, margine lato, sterili, poris plerumque obliquis, mediis, subæqualibus, angulatis, dissepimentis tenuibus.—*Polyporus membranicinctus*, Berk. in Herb. No. 2909.

Ad ligno emortuos. Tasmania, 1379.

Pores often in patches, leaving spots of the membrane naked.

1067. *Poria* (Moll.) *porriginosa*, Berk.

Irregulariter effusa, immarginata, tenuis, pallido-rosea, poris valde irregularibus, inæqualibus, lacunosis lacunæ angulatis, vel rotundatis, demum confluentibus, dissepimentis tenuissimis.—*Polyporus porriginosus*, Berk. in Herb. No. 2934.

On the ground? Bombay.

The very thin dissepiments break away in drying and leave large naked, rounded lacunæ in the hymenium.

1090. *Poria* (Rigidi) *Beaumontii*, B. & C.

Effusa, adnata, crassiuscula, ochraceo-pallida, margine angusto subtomentoso, poris majusculis, subæqualibus, rotundo-angulatis, dissepimentis acie acutis, integris.—*Polyporus Beaumontii*, Berk. & Curt. in Herb. Berk. No. 2919.

Ad ligno. Alabama, U.S.

1092. *Poria* (Rigidi) *holoxantha*, B. & Cooke.

Orbicularis, dein confluens effusaque, ochraceo-pallida, adnata, subrigida, poris majusculis, subæqualibus, rotundatis, dissepimentis tenuibus, margine acutis.—*Polyporus holoxanthus*, Berk. and Cooke in Rav. Amer. Fungi No. 213-214, Herb. Berk. No. 2848.

Ad cortices *Quercus* et *Myrica*. Georgia, U.S. (Rav. 2402-2494).

Pores smaller than in *P. omæma*. Some of these American species are doubtfully distinct.

1093. *Poria* (Rigidi) *omæma*, Berk.

Effusa, ochraceo-alba, rigida, e mycelio tomentosa albida constipata, subtus villosa; poris mediis ($\frac{2}{5}$ - $\frac{1}{3}$ mm.), angulatis, integris, plerumque obliquis.—*Polyporus omæmus*, Berk. in Herb. No. 2837, *P. radula*, Rav. Amer. Exs. No. 107.

Ad truncos. Pini, S. Carolina.

1094. *Poria* (Rigidi) *tomentocincta*, B. & Rav.

Effusa, adnata, subrigida, ochraceo-pallida, margine subtomentoso, poris majusculis, rotundatis, æqualibus, dissepimentis crassiusculis, acutis.—*Polyporus tomentocinctus*, Berk. and Rav. in Herb. Berk. 2858.

Ad cortices *Quercus*. Carolina, U.S. (Rav. 1771).

1096. *Poria (Rigidi) subaurantia*, Berk.

Effusa, subrigida, secernibilis, ochracea demum aurantio, maculata-margine tenuiore, sterili, poris majusculis, rotundatis, subæqualibus, dissepimentis tenuibus, acutis, integris.—*Polyporus subaurantius*, Berk. in Herb. No. 2859.

Ad cortices. Carolina, U.S. (2500).

1104. *Poria (Rigidi) hyperboræa*, Berk. Herb. Kew.

Ad truncos. British North America (Dr. Richardson).

This also is a very doubtful species, not apparently described. There is but a single specimen, which apparently is the resupinate condition of *Polystictus*, and probably *P. hirsutus* or *P. velutinus*.

1130. *Poria (Retic) Cincinnati*, Berk.

Effusa, ochraceo-pallida, tenuis, subtomentosa, margine extremo elevato, poris magnis, concavis, inæqualibus, rotundato-argulatis, dissepimentis brevibus, obtusis, hinc illic suppressis.—*Polyporus Cincinnati*, Berk. in Herb. No. 2920.

Ad cortices. Cincinnati, U.S. (Lea 230).

1131. *Poria (Retic) porotheloides*, B. & C.

Alba, effusa, membranacea, subtus fuscescens, adnata, margine sublibero, plerumque sterili, poris brevissimis, hinc illic obsoletis, angulatis, inæqualibus, pallidis, dissepimentis venulosis.—*Polyporus porotheloides*, Berk. & Curt. in Herb. Berk. No. 2889.

Ad cortices, &c. Venezuela.

Pores in some parts reduced to almost inappreciable depressions, sterile portions albo-tomentose.

ENCHIRIDION FUNGORUM.*

We are glad to meet with our friend, and in one instance coadjutor, Dr. Quelet, in type again; and we congratulate him on the production of this work, almost uniform in size and style with the "Clavis Hymenomycetum." Unfortunately, those congratulations cannot proceed much farther, for, in our opinion, the interminable alterations and sweeping revolution that he has made throughout cannot claim our sympathy, and must render his labour practically useless; for no one would think of passing through an entire course of education in order to comprehend and use it. To explain the extent of these alterations is hardly possible; the genera are altered, the sequence is changed, and the whole scheme of the Hymenomycetes reduced to a delightful chaos. In the first place, the *Hymenomycetes* become transformed into *Gymnobasilii* and the *Agaricini* into *Polyphyllei*. Here we encounter the following genera in succession: *Ammita*, *Lepiota*, *Gyrophila* (which includes *Armillaria*, *Tricholoma*, in part, and the other part as *Gymnoloma*, as subgenera), *Omphalia* (which includes *Clitocybe*), *Collybia*, *Mycena*, *Omphalina* (most of the old subgenus *Omphalia*), *Calathinus* (which represents part of *Pleurotus*), and *Uygrophorus*, which completes the *Leucospori*. Further on in the work, after

* *Enchiridion Fungorum* in "Europa media et præsertim in Gallia vigentium," scripsit, L. Quelet. Lutetia, 1886.

the coloured-spored genera are disposed of, we come back to the *Leucospori* again under the designation of *Asterospori*, and here we encounter *Lactarius* and *Russula*. Then commences a new tribe, with a more coriaceous substance and tougher gills, under the designation of *Lenti*, where we have *Cantharellus*, *Xerotus*, *Dictyolus* (a mixture of *Xerotus* and *Cantharellus*), *Arrhenia*, and *Nyctalis*. These five genera form the plicate section, followed by the lamellate section, which includes *Marasmius*, *Pleurotus*, *Lentinus*, and *Panus*. Another tribe, called *Suberei*, includes *Lenzites* and *Schizophyllum*. Thus much will show how the genera and subgenera are disposed of. But if we attempt to analyse each of these new genera to ascertain how they are made up, we shall find in too many cases fearful changes which are wholly incomprehensible. So that, altogether, in the majority of instances, without the slightest index to specific names, it will be found that, in using this volume as a "Field Book," one may walk a mile or two before he discovers the location of any particular species. Talk of puzzles, difficult groups, the mysteries of the *Cortinari*, &c., these are minor troubles as compared with obtaining a complete mastery of "Enchiridion Fungorum." We commenced with congratulating our friend with being at work again, and, in conclusion, we will again congratulate him on having produced an elaborate Handbook of Fungi which is a marvel of topsy-turvyism that no fellow can understand, much less make any use of. We hope that no Mycologist will ever be tempted to take this "Handbook" into a lonely wood with him, unless his pockets are otherwise well fortified, and he has a trusty and cheerful companion. If known at all in the next generation, it will be as one of the "curiosities of scientific literature."

NEW BRITISH FUNGI.

By M. C. COOKE.

(Continued from Vol. XIV., p. 133.)

Russula (Furcatæ) olivascens, *Fr. Hym. Eur.*, 441.

Pileus everywhere fleshy, flattened, umbilicate, olivaceous, the disc becoming yellow, margin even, stem firm, even, white, gills attenuated behind, crowded, almost equal, white, becoming yellowish; spores ochraceous.

Amongst grass. Pleasure Grounds, Kew, August, 1886 (G. M.).

Russula (Fragiles) ochracea, *Fr. Hym. Eur.*, 453.

Mild. Pileus fleshy, soft, plane, then depressed, with a thin viscid enticle, shining, margin thin, sulcate, flesh ochraceous, stem spongy, stuffed, soft, striate, gills reaching the stem, broad, scarcely crowded, ochraceous as well as the stem.—*Kromb.*, t. 68, f. 9, 10.

Amongst grass. Pleasure Grounds, Kew (G. M.), Aug., 1886.

Pileus ochraceous, about 3 inches broad, disc a little darker.

Russula purpurea, *Gillet Hymen., ser. xi, pl. x.*

Rather mild. Pileus viscid; cuticle separable; stem stuffed, striate; margin even; gills free, white, unchangeable; a few of them furcate.

Under trees. Pleasure Grounds, Kew, Sept., 1885.

We have seen no description of this species, but our specimens agree exactly with Gillet's figures.

Boletus rubinus, *Smith, Journ. Bot., 1868. Fr. Hym. Eur., 504.*

This pretty little species has been rather plentiful, during the early part of August, in the pleasure grounds at Kew. The peculiar rosy-red of the hymenium is very characteristic.

Boletus cruentus, *Vent. Mic., t. 43, f. 3, 4. Fr. Hym. Eur., 507.*

Pileus convex then plane, smooth, at length rugulose, gilvous; stem thick, rather bulbous, attenuated downwards into a rooting base, and upwards into the pileus; flesh yellowish, turning blood-red, especially about the top of the stem when cut; pileus also stained red where touched or bruised. Tubes adnate, pores small, simple, yellow. Odour fœtid.

Under beech. Kew Gardens (G. M.), August, 1886.

Pileus about three inches broad, stem four inches long, one inch thick, yellowish, clad with small tomentose scales, not unlike *B. duriusculus*. Although the pileus is at first rather velvety, it becomes nearly smooth, and despite its fœtid odour, which is not mentioned by Venturi, we consider this a form of his species.

Æcidium Glaucis, *Dozy. & Molk. Tijdschr. v. Nat. Gesch., xii, p. 16. Rabh. Krypt. Flora (Winter), i., 262. Kunze Fungi Exs., No. 51. Rabh. Fung. Eur., 1599. Thumen Mycoth., 1021.*

Spores polygonal, colourless, $16-24\ \mu \times 14-20\ \mu$.

On *Glaux maritima*. Paull, near Hull. July, 1886 (E. A. Peak).

ANNUAL FORAYS.—We are informed that the Cryptogamic Society of Scotland will hold its annual meeting this year at Aberdeen, under the presidency of Professor J. W. H. Trail, on the 1st of September; that the Leeds Naturalist Society will devote a week to Fungus excursions during the last week in September, ending on Saturday, October the 2nd; the Hackney Natural History Society taking a day in Epping Forest about the 25th of September. The Woolhope Club has arranged for the Hereford meeting in the week commencing on Monday, Oct. 4th, the Foray day and annual dinner being fixed for Thursday, Oct. 7th. As at present informed we anticipate that the Essex Field Club will devote two days to excursions in Epping Forest after the close of the Hereford meeting. Suggestions have been made for similar meetings in connection with a Society at Tunbridge Wells and the Hertfordshire Natural History Society, but no dates have transpired. Although the French Cryptogamists have made no announcement for this year, it has been intimated that they purpose inviting English Mycologists to a series of excursions to be held in some week during the autumn of 1887.

BRITISH DESMIDS.*

Three parts of this work have now appeared, and it is hoped will be continued monthly, until complete; uniform in size and style to the "British Fresh-Water Algæ," of which it may be regarded as a continuation. No apology is required for the publication of a work so much demanded, as nothing of the kind has been attempted since the year 1848, except the "American Desmids," by the Rev. F. Wolle, which does not entirely fill the vacant place. It would be unbecoming in us to venture any expression of opinion on a subject from which we are precluded by personal prejudice and self-interest, which, however, need not hinder us from a reference to facts, leaving the criticism to others. This is the third time which the present work has been prepared for the press during the past four or five years. In the first and second instance it was made ready at the instigation of a publisher, who intended immediately to issue it on his own responsibility, but in both cases a collapse occurred, which put an end to all business, before the publication commenced. The greater part of the work being done, including the plates, it was consequently the cause of some annoyance to the author to find that twice he had wasted some months of continuous labour without result, and determined him upon waiting no longer on the pleasure of others, but at once to issue it at his own risk, although all the plates had to be redrawn from a much larger page, in order to make them uniform with the "Fresh-Water Algæ." This statement will show that the intention to produce such a work extends backwards for at least five years, and was not suggested by the announcement of any other work on the same subject, and its publication was determined upon, and made public, before any intimation that any similar volume was projected had reached us. Therefore no idea of competition could have been present, as we were undoubtedly in possession of the field, and had accepted the names of subscribers fully three years ago.

Personally feeling no ambition to abandon the illustration of Fungi in favour of Algæ, and scarcely any inclination to add to our responsibilities, we should have been glad to have left this work in other hands, had we known of any definite intention in other quarters to proceed with it, before we had advanced so far, and committed ourselves to its execution. With this explanation we submit the first three parts to the judgment of our supporters, and all who are interested in British Cryptogamic Botany.

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A QUARTERLY RECORD OF CRYPTOGAMIC BOTANY
AND ITS LITERATURE.

BRITISH PYRENOAMYCETES.

A preliminary list of known species.

By G. MASSEE.

(Continued from p. 9.)

Fam. 2. **XYLARIÆ**. Composite. Perithecia carbonaceous, immersed in a multiform stroma. Sporidia brown.

GEN. 1. **XYLARIA**, *Hill*. Stroma erect, branched, clavate or filiform, with perithecia somewhat immersed.

A. **XYLOGLOSSA**. *Club everywhere fertile, stem smooth.*

a. *Capitulum clavate, stem thin, elongated.*

1. *X. scotica*, *Cooke, Sacc. Syll.* 1202 ; *Grev.* iv, 112.

On the ground. Meikloner, Perth, N.B.

2. *X. tortuosa*, *Sow., Sacc. Syll.* 1208 ; *Grev.* viii, 10.

On the ground. Mead Place, London, S.E.

b. *Capitulum subclavate, stem thick, shortened, or obsolete.*

3. *X. polymorpha*, *Grev., Sacc. Syll.* 1150.

On old stumps. Common.

B. **XYLOCORYNE**. *Club everywhere fertile, stem villous.*

4. *X. corniformis*, *Mont., Sacc. Syll.* 1239 ; *Hdbk.* 2373.

On fallen branches. Speke Hall, Lancashire.

C. **XYLOSTYLA**. *Club sterile at the apex, stem smooth.*

5. *X. digitata*, *Fr., Sacc. Syll.* 1283 ; *Hdbk.* 2372.

On stumps, &c. Common.

6. *X. bulbosa*, *Pers., Sacc. Syll.* 1285 ; *Hdbk.* 2377.

Amongst fir leaves. Bath, Lucknam, and Rushton, Wilts.

(C. E. B.)

7. *X. vaporaria*, *Berk., Sacc. Syll.* 1292 ; *Hdbk.* 2378.

On *Sclerotium* found in a mushroom bed. Cornwall. Cultivated. (F. C.)

8. *X. filiformis*, *Fr., Sacc. Syll.* 1296.

On dead leaves.

D. XYLODACTYLA. Club sterile at the apex, stem hairy.

9. *X. carpophila*, *Fr.*, *Sacc. Syll.* 1270 ; *Hdbk.* 2375.
On beech mast. Common.
10. *X. hypoxylon*, *Fr.*, *Sacc. Syll.*, 1260 ; *Hdbk.* 2374.
On stumps, &c. Common.
11. *X. pedunculata*, *Fr.*, *Sacc. Syll.* 1259 ; *Hdbk.* 2376.
On soil, often growing from dung. King's Cliffe.
12. *X. Tulasnei*, *Nke.*, *Sacc. Syll.* 1265 ; *Grav.* vii, 79.

GEN. 2. **THAMNOMYCES**, *Ehrb.* Stroma erect or filiform. Perithecia superficial, lax.

1. *T. hippotrichoides*, *Sow.*, *Sacc. Syll.* 1303 ; *Hdbk.* 2380.
On an old sack. Wisbech.
On matting, &c. Bungay.
On cocoanut fibres. Scarborough.

GEN. 3. **PORONIA**, *Fr.* Stroma cup-shaped, stipitate.

1. *P. punctata* (*Linn.*) *Sacc. Syll.* 1321 ; *Hdbk.* 2379.
On horse and cow dung. Barmouth, Albury, &c.

GEN. 4. **USTULINA**, *Tul.* Stroma pulvinate, repand, thick, somewhat hollow when old.

1. *U. vulgaris*, *Tul.*, *Sacc. Syll.* 1328 ; *Hdbk.* 2381.
On rotten trunks. Common.

GEN. 5. **NUMMULARIA**, *Tul.* Stroma discoid or cup-shaped, adnate, marginate.

1. *N. lutea*, *A. & S.*, *Sacc. Syll.* 1528.
On *Salix*, *Alnus*, *Corylus*, &c. King's Lynn.
2. *N. succenturiata*, *Tode.*, *Sacc. Syll.* 1527.
On oak and maple.
3. *N. gigas*, *Plow.*, *Grav.* viii, p. 106, t. 130, f. 3 ; *Sacc. Syll.* 1531.
On *Betula*. Ringstead Downs.
4. *N. Bulliardi*, *Tul.*, *Sacc. Syll.* 1524 ; *Hdbk.* 2395.
On wood and bark.

GEN. 6. **DALDINIA**, *De Not.* Stroma nearly sphaerical, with a carbonaceous bark, becoming black, internally fibrous and concentrically zoned.

1. *D. concentrica* (*Bolt.*), *Sacc. Syll.* 1515, 2384.
On old ash trees, and burnt furze stems. Common.

GEN. 7. **HYPOXYLON**. Stroma effused or somewhat globose, solid ; perithecia innate in the stroma, almost without necks.

A. SPHEROXYLON. Stroma superficial, globose or subglobose.
a. Stroma coloured, not black.

1. *H. coccineum*, *Bull.*, *Sacc. Syll.* 1333 ; *Hdbk.* 2385.
On beech, &c. Common.

2. *H. argillaceum*, Pers., Sacc. Syll. 1337 ; Hdbk. 2389.
On dead ash branches. Apethorpe, Weybridge, Batheaston,
North Wootton.
3. *H. fuscum*, Pers., Sacc. Syll. 1368 ; Hdbk. 2390.
On hawthorn, hazel, &c. Common.
b. Stroma black.
4. *H. multiforme*, Fr., Sacc. Syll. 1376 ; Hdbk. 2386.
On birch. Common.
5. *H. majuseulum*, Cke., Sacc. Syll. 1369 ; Grev. vii, 80.
On rotten wood. Apethorpe, Norths.
6. *H. coharens*, Pers., Sacc. Syll. 1370 ; Hdbk. 2388.
On dead branches of beech, &c. Darent, Downton.
- B. CLITOXYLON. *Stroma pulvinate, more or less convex, not effused.*
7. *H. marginatum*, Schw., Sacc. Syll. 1414 ; Hdbk. 2387.
On dead wood. Chatsworth, Glamis.
C. PLACOXYLON. Stroma broadly effused.
a. Stroma coloured, not black.
8. *H. atropurpureum*, Fr., Sacc. Syll. 1433 ; Hdbk. 2392.
On rotten wood. Appin, Bishop's Wood.
9. *H. rubiginosum*, Pers., Sacc. Syll. 1434 ; Hdbk. 2391.
On decorticated trunks and branches. Norths.
10. *H. miniatum*, Cke., Sacc. Syll. 1432 ; Grev. vii, 80.
On decorticated wood. Shere.
b. Stroma black.
11. *H. serpens*, Pers., Sacc. Syll. 1448 ; Hdbk. 2393.
On dead elder, beech, &c. King's Cliffe, East Bergholt,
Epping.
- D. ENDOXYLON. *Stroma more or less immersed in the matrix.*
12. *H. udum*, Pers., Sacc. Syll. 1435 ; Hdbk. 2394.
On rotten branches. King's Cliffe, Wothorpe, Weybridge,
Maxwell's Fields, Kidbrooke.
13. *H. semi-immersum*, Nke., Sacc. Syll. 1487.
On rotten wood, not uncommon.

Fam. 3. DOTHIDEACEÆ, Fr.

Sub-Fam. I. DOTHIDEOIDEI.

GEN. 1. **PHYLLACHORA**, Fekl. Stroma somewhat effuse or shortly effused, for the most part growing on leaves.

Sub-Gen. EUPHYLLACHORA. Stroma shortly effused, usually epiphyllous.

a. Sporidia continuous, hyaline.

1. *P. ulmi* (Dw.), Sacc. Syll. 5091 ; Hdbk. 2412.
On elm leaves. Common.

2. *P. trifolii*, *Pers.*, *Sacc. Syll.* 5184 ; *Hdbk.* 2416.
On living clover leaves. Common.
 3. *P. heraclei*, *Fr.*, *Sacc. Syll.*, 5123 ; *Hdbk.* 2414.
On living leaves of *Heracleum spondylium*. Forden.
 4. *P. graminis*, *P.*, *Sacc. Syll.* 5132. *Hdbk.*, 2418.
On half-dead leaves of grass. Common.
 5. *P. epityphæ*, *Cke.*, *Sacc. Syll.* 5143 ; *Grev.* vii, 79.
On stem of *Typha*. King's Lynn.
 6. *P. junci*, *Fr.*, *Sacc. Syll.* 5144 ; *Hdbk.* 2417.
On stems of rushes. Common.
 7. *P. caricis*, *Fr.*, *Sacc. Syll.* 5242 ; *Hdbk.* 2419.
On leaves of *Carices*. Forfarshire, Swanscombe Marshes.
 8. *P. pteridis*, *Reb.*, *Sacc. Syll.*, 5153 ; *Hdbk.* 2421.
On fronds of *Pteris aquilina*. Darenth, Scotland, Wakefield.
- b. Sporidia unknown.*
9. *P. angelicæ*, *Fr.*, *Sacc. Syll.* 5193 ; *Grev.* vii, 79.
On leaves of *Angelica*.
 10. *P. podagrariæ* (*Roth.*), *Sacc. Syll.* 5194 ; *Hdbk.* 2415.
On living leaves of *Ægopodium podagraria*.
- C. DOTHIDEA. Sporidia uniseptate, hyaline.*
11. *P. betulina*, *Fr.*, *Sacc. Syll.* 5256 ; *Hdbk.* 2413.
On living leaves of *Betula nana*. Scotland.
On *Betula alba*.

GEN. 2. **DOTHIDEA**, *Fries.* Stroma erumpent, pulvinate.

A. BAGNISIELLA. Sporidia continuous, hyaline.

1. *D. rhamni*, *Mont.*, *Grev.* xiii, 66.
On bark of *Rhamnus*. Highgate Wood.
- B. PLOWRIGHTIA. Sporidia uniseptate, hyaline.*
2. *D. ribesii*, *Pers.*, *Sacc. Syll.* 5285 ; *Hdbk.* 2424.
On dry branches of gooseberry and red currant. Common.

C. EUDOTHIDEA. Sporidia uniseptate, brown.

3. *D. sambuci*, *Pers.*, *Sacc. Syll.* 5296 ; *Grev.* vii, 79.
On dead branches of elder.
4. *D. tetraspora*, *B. & Br.*, *Sacc. Syll.* 5299 ; *Hdbk.* 2422.
On dead twigs of *Daphne laureola* and *Ulex*. Mossburnford. Hereford.
5. *D. frangulæ*, *Fekl.*, *Sacc. Syll.* 5302 ; *Grev.* viii, 106.
On dead branches of *Rhamnus frangula*. Shrewsbury.

GEN. 3. **HOMOSTEGIA**, *Fekl.* Parasitic stroma nearly plane, or hemispherical, very fragile.

* *Sporidia 3 septate.*

1. *H. Piggottii*, *B. & Br.*, *Sacc. Syll.* 5338 ; *Hdbk.* 2428.
Parasitic on *Parmelia saxatilis*. Llyn Cac. Cader Idris.

* *Sporidia multiseptate.*

2. *H. nigerrima*, *B. & Br.*, *Sacc. Syll.* 3838; *Grev.* xiii, 62.
Parasitic on species of *Diatrype*. Gopsall, Bath, Twycross,
Forden.

GEN. 4. **RHOPOGRAPHUS**, *Nitke*. Stroma linear.* *SCHIRRHIA*, *Nitke*. *Sporidia uniseptate, hyaline.*

1. *R. rimosa*, *A. & S.*, *Sacc. Syll.* 5280; *Grev.* viii, 106.
On *Phragmites communis*. Castle Rising.
2. *R. depauperata*, *Desm.*, *Sacc. Syll.* 5281; *Grev.* viii, 106.
On stems of reed. Castle Rising.

* *GENUINA*. *Sporidia 3-5 septate.*

3. *R. filicinus*, *Fr.*, *Sacc. Syll.* 5334; *Hdbk.* 2427.
On stems of *Pteris aquilina*. Common.

Sub-Fam. II. RHYTISMOIDEI.

GEN. 1. **RHYTISMA**, *Fries*. Stroma flattened, discoid or effused, multilocular, at first closed, at length splitting.

1. *R. maximum*, *Fr. Syst. Myc.* ii, 566; *Hdbk.* 2276.
On willow branches. King's Cliffe, Hinton, Cambridge.
2. *R. acerinum*, *Pers. Syn.* 104; *Hdbk.* 2279.
On leaves of sycamore and maple. Common.
3. *R. punctatum*, *Fr. Syst. Myc.* ii, 569; *Hdbk.* 2280.
On sycamore and maple leaves.
4. *R. salicinum*, *Fr. Syst. Myc.* ii, 568; *Hdbk.* 2278.
On willow leaves. Common.
5. *R. andromedæ*, *Fr. Syst. Myc.* ii, 567; *Hdbk.* 2277.
On living leaves of *Andromeda polifolia*. Cheshire, Yaxley, Hunts, Dundee.
6. *R. urticæ*, *Fr. Syst. Myc.* ii, 570; *Hdbk.* 2281.
On nettle stems. Apethorpe, King's Cliffe, Dundee.
7. *R. empetri*, *White, Ann. N.H.* No. 1650; *Grev.* v, 64.
On *Empetrum nigrum*. Rannoch, Perthshire.

Sub-Fam. III. STIGMATEOIDÆ.

Perithecia more or less distinct, for the most part simple and superficial.

GEN. 1. **HYOSPILA**, *Fr.* Perithecia more or less distinct, immersed in a pseudo-stroma, and growing on leaves.

1. *H. bifrons*, *D.C.*, *Sacc. Syll.* 3535; *Hdbk.* 2799.
On dry oak leaves. Shere, Surrey.
2. *H. inunda*, *Fckl.*, *Sacc. Syll.* 3536; *Hdbk.* 2803.
On the under surface of oak leaves. Shere, Surrey.
3. *H. viburni*, *Buck.*, *Grev.* xii, 44.
On dead leaves of *Viburnum luntana*. Bristol.

GEN. 2. **STIGMATEA**, Fr. Perithecia rather prominent, of a rather thick substance. Ostiolum minute.

* *EUSTIGMATEA*. *Sporidia uniseptate*.

1. *S. Nicholsoni*, Cke., *Sacc. Syll.* 6073; *Grav.* xi, 16.
On leaves of Portugal laurel. Newcastle, Co. Tipperary.
2. *S. Robertiani*, Fr., *Sacc. Syll.* 2105; *Hdbk.* 2794.
On green leaves of *Geranium Robertianum*. Common.
3. *S. geranii*, Fr., *Sacc. Syll.* 2106; *Hdbk.* 2792.
On leaves of *Geranium sylvaticum*. Hawthornden, near Edinburgh, Forden.
4. *S. ranunculi*, Fr., *Sacc. Syll.* 2109; *Hdbk.* 2793.
On leaves of *Ranunculi*. Berwick, Forden.

* *Doubtful species*.

5. *S. ostruthii*, Fr., *Sacc. Syll.* 2124; *Hdbk.* 2776.
On leaves of *Angelica sylvestris*. Hampstead, Forden, King's Cliffe, Kirby, Suffolk. Common.
6. *S. ægopodii*, Fr., *Sacc. Syll.* 2125.
On leaves of gout weed. Common.

Phyllachora angelicæ and *P. podagrariæ* are probably the same things as the above.

Fam. 4. **MELOGRAMMÆ**, Ntke. Perithecia formed from the stroma, or confluent therewith, nearly free at the apex, usually destitute of a neck.

GEN. 1. **BOTRYOSPHERIA**, De Not. Perithecia erumpent or superficial, united at the base in a stroma, cæspitose or confluent.

* *Sporidia continuous, hyaline*.

1. *B. advena*, Ces., *Sacc. Syll.* 1767; *Hdbk.* 2423.
On beech. Jedburgh.
2. *B. dothidea*, M. & N. (= Rosæ, Fr.). *Sacc. Syll.* 1776; *Hdbk.* 2425.
On living rose stems. Penzance, Norfolk, &c.

GEN. 2. **ENDOTHIA**, Fr. Stroma as in *Diatrype*, saffron yellow, perithecia immersed, becoming black.

* *Sporidia uniseptate, hyaline*.

1. *E. gyrosa*, Schw., *Sacc. Syll.* 2342; *Hdbk.* 2408.
On bark. New Forest.

GEN. 3. **FUCKELIA**, N. Stroma erumpent, subglobose, or pulvinate, resembling *Hypoxyylon*, perithecia immersed in the periphery.

* *Sporidia continuous, brown*.

1. *F. gastrina*, Fr., *Sacc. Syll.* 1129; *Hdbk.* 2409.
On dead poplar branches. Shrewsbury (Leighton).
On dead elm. Pentrick, Gopsall.
2. *F. Plowrightii*, Nsl., *Sacc. Syll.* 1134.
On *Ulex europæus*. Hereford, Penzance.

GEN. 4. **MELOGRAMMA**, *Fr.* Stroma erumpent or superficial, subglobose, pulvinate or somewhat effused, perithecia aggregated in clusters, for the most part immersed in a stroma and rather prominent.

* VALSARIA. *Sporidia uniseptate, brown.*

1. *M. rubricosa*, *Fr., Sacc. Syll.* 2814; *Grev.* iv, 25.
On dead bark. Ringstead.

* *Sporidia triseptate, brown.*

2. *M. vagans*, *Not., Sacc. Syll.* 3381; *Hdbk.* 2405.
On hornbeam bark. Rudloe, Oundle.
3. *M. homalea*, *Fr., Sacc. Syll.* 3956; *Hdbk.* 2406.
On dead bark of sycamore.

* *THYRIDARIA. Sporidia multiseptate.*

4. *M. rubro-notata*, *B., Sacc. Syll.* 3367; *Hdbk.* 2407.
On dead wood and bark of elm. King's Cliffe.

NEW BRITISH FUNGI.

BY M. C. COOKE.

(Continued from p. 29.)

Agaricus (Tricholoma) russula, *Schæff. Icon., t.* 58.

Pileus fleshy, convex, then depressed, obtuse, granulate, viscid, rosy flesh colour; stem solid, firm, nearly equal, rosy, squamulose at the apex; gills rounded, then decurrent, rather distant, white, a little spotted with red. Taste mild.—*Fr. Hym. Eur.*, 52.

Under trees. Arboretum, Kew, Oct., 1886. (G. Massee).

Pileus 3-4 in. Stem 3 in.; $\frac{3}{4}$ in. thick. Spores elliptical; $10 \times 5 \mu$. Quite distinct from *Hygrophorus erubescens*, with which it is often confounded. Has superficially very much the habit and appearance of some species of *Russula*.

Agaricus (Tricholoma) pes-capræ, *Fr. Hym. Eur.*, 63.

Pileus fleshy, thin, conical, then expanded, *umbonate*, fragile, unequal, grey, then dusky, smooth, margin cracked, at length splitting; stem solid, equal (or attenuated at the base), smooth; gills emarginate, broad, crowded, then rather distant, white then cinereous.

var. **multiformis**, *Schæff. Icon., t.* 14.

Cæspitose, sometimes confluent at the base, margin involute, entire.

Under trees. Kew Gardens, Oct., 1886. (G.M.).

Agaricus (Collybia) fodiens, *Kalch. Icon., t.* 36, f. 2.

Pileus fleshy, firm, convex, obtuse, margin inflexed (2-3 in.), even, smooth, flesh colour, becoming yellowish, darker and gilvous in the centre. Stem hollow, tough, somewhat ventricose, often longitudinally costate (2 in. long, 5-6 lines thick), attenuated into

a rooting base of equal length, or longer, deeply immersed in the ground, smooth, white. Gills rounded, emarginate, crowded, narrow, yellowish white.

On grass borders. Alresford, Hants. (Rev. W. L. W. Eyre.)

Allied to *Ag. maculatus*.

Agaricus (Collybia) prolixus, *Fl. Dan.*, t. 1608.

Pileus fleshy, convex, then flattened, gibbous, large, even, smooth; stem solid, rather stout, nearly equal, abrupt at the base, sulcate, brick red; gills free, crowded, quite entire, white, unspotted.—*Fries. Hym. Eur.*, 113.

Amongst dead leaves, &c. Kew Gardens, Oct., 1886. (G. M.)

Pileus 2-3 in. Stem 4 in. long; $\frac{1}{2}$ in. thick.

Agaricus (Pleurotus) ostreatus, *Fr.* var. **columbinus**, *Bresadola*.

Pileus fleshy, irregular, subrotund, margin involute, plano-convex, gibbous then umbilicate, margin pigeon-coloured blue, centre rather flesh colour, becoming yellowish, smooth (6-10 cm.), umbo or umbilicus whitish pilose, stem excentric, lateral, strigose, variable in length (to $1\frac{1}{2}$ cm. thick). Flesh white. Gills crowded, broad, attenuato-decurrent, anastomosing behind, glaucous, edge entire, or delicately fimbriate under a lens. Spores hyaline, ovate oblong, trinucleate (10-12 μ).—*Pleurotus columbinus*, *Quelet*, in *Bresadola Fungi Tridentini*, t. vi.

On stumps. Kew Gardens. (G. Massee).

Agaricus (Nolanea) nigripes, *Trog. in Flora*, 1834, p. 527.

Pileus submembranaceous, conical then campanulate, obtuse, without striæ, sprinkled with paler flocci, fuscous; stem fistulose, twisted, smooth, black; gills nearly free, thin, ventricose, yellow becoming flesh colour.—*Fr. Hym. Eur.* p. 207.

Amongst moss in swamp. Watford. Nov., 1886.

Stem tough, 4-5 in. long. Pileus $1\frac{1}{2}$ in. broad. Odour of putrid fish. Allied to *Ag. pisciodorus*.

Agaricus (Naucoria) festivus, *Fr. Hym. Eur.*, 253.

Pileus fleshy, convex, somewhat gibbous, even, glutinous, commonly olive-brown, dirty whitish when dry; stem hollow, a little rooting, variously coloured; gills free, ventricose, crowded, becoming ferruginous.—*Bres. Fungi Trident.*, t. 22.

Amongst grass. Carshalton, Sept., 1886. (G. M.)

Stem 2 in. or more long; 2-4 lines thick. Pileus 1-2 in. broad.

Agaricus (Inocybe) perlatus, *Cooke sp. nov.*

Pileus fleshy, convex, then expanded, broadly umbonate, longitudinally fibrous (3-4 in. diam.), with darker fibrils, fuscous, margin paler, incurved, disc dark bistre, nearly black. Stem solid, equal, straight or curved, sometimes twisted (3-4 in. $\times \frac{3}{4}$ in.), striate, dark below when old, pallid and mealy above, flesh dirty white; gills adnexed, somewhat rounded behind, rather broad, pallid, then umber. Spores elliptical, smooth, rather irregular.

On the ground. Epping Forest; near Oxford.

Pileus 3-4 in. Stem 4 in. long, $\frac{1}{2}$ - $\frac{3}{4}$ in. thick. Allied to *Ag. fibrosus*.

Agaricus (Psalliota) sagatus, *Fr. Hym. Eur.*, 281.

Pileus rather fleshy, convexo-plane, even, smooth, fulvous, rather shining; stem hollow, equal, ring *distant, spreading*; gills free, ventricose, umber.

Under beech. Kew Gardens, Oct. 1886. (G. M.)

Stem 2 in. long, 3 lines thick. Pileus 2 in. broad.

Agaricus (Psathyra) gyroflexus, *Fries Hym. Eur.*, 305.

Pileus membranaceous, conical-campanulate, *striate*, atomate, growing pallid; stem slender, *flexuous*, silky and shining, white; gills adnexed, crowded, soft, grey, becoming purplish.

Amongst grass. Scarborough. (G. Masee.)

Stem 2 in. long, 1 line thick. Pileus 5 lines (or more) broad, grey, with a rufescent disc. Subcæspitose.

Coprinus tardus, *Karst. Symb. Myc. Fenn.* VI., 20.

Pileus fleshy, thin, fragile, ovoid, then campanulate, sulcate or broadly striate, quite smooth, bay, then growing pallid (3-6 cm. broad and high). Stem fistulose, somewhat bent, equal, finely striate about the apex, rather downy, white (6-9 cm. high, 5 mm. thick). Gills adnate, crowded, very narrow (2 mm.), narrowed outwards, whitish, then brownish, at length black. Spores ovoid, rather angular, unequal-sided, fuscous ($12-18 \times 7-9 \mu$). Inodorous, cæspitose.—*Karsten Icon. Sel. Hym. Fenn.*, p. 10, t. 5, f. 19.

On the ground. Kew Gardens, Oct., 1886. (G. M.)

Hygrophorus pudorinus, *Fr. Hym. Eur.*, 407.

Pileus fleshy, convex, then depressed, even, smooth, flesh colour; stem solid, firm, white, *narrowed at the apex*, rough, with white points; gills thick, distant, white.—*Gonn. & Rabh.*, t. 11, f. 3.

In woods. Near Coventry. (Rev. F. C. O. Adams.)

Lactarius helvus, *Fries Hym. Eur.*, 433.

Pileus fleshy, fragile, convex, then plane or depressed, subumbonate, dry, silky, then floccose-squamulose and cracked, pale brick-red, growing pallid; stem stuffed, then hollow, *pruinose* or *pubescent*; gills decurrent, thin, crowded, whitish, then ochraceous; milk sparse, rather acrid, white.

On swampy ground. Near Carlisle, Sept., 1886.

Lactarius cemicarius, *Batsch. Elen.*, f. 69.

Dusky ferruginous. Pileus plane, then infundibuliform, margin unequally sinuate, lobes convex, pulvinate; stem opaque, more or less dark in colour, hollow, substance soft and dry. Gills rather broad, dusky ochre. Milk limpid, like serum. Odour of bugs.

On the ground. Haywood Forest, Oct., 1886.

Considered by Fries as intermediate between *L. subdulcis* and *L. camphoratus*, perhaps a variety of the latter.

Lactarius subumbonatus, *Lindg. in Bot. Not.*, 1845.

Pileus fleshy, thin, convex, then depressed, rather umbonate, *rugose*, punctate, *dark cinnamon*, without zones, at length undulated, repand, *flesh grey then yellowish*. Stem stuffed, rufescent;

gills adnate, flesh colour, then rufescent. Milk watery white.—*Fr. Hym. Eur.*, 437.

On the ground. Chingford, Epping Forest, Sept., 1886.

Odour fætid when old.

Russula albo-nigra, *Krombh.*, p. 27, t. 70, f. 16, 17.

Pileus fleshy, convexo-plane, depressed in the centre, at length infundibuliform, viscid, whitish, smoky about the margin, flesh white, becoming blackish when broken, stem solid, stout, fuscous then blackish, gills decurrent, crowded, unequal, dusky whitish.—*Fries Hym. Eur.*, 440.

In grassy places. Kew. (G. M.)

Probably only a variety of *R. adusta*.

Russula densifolia, *Seer. Mycog.*, 1., 476.

Pileus fleshy, compact, convex, then depressed, margin inflexed, smooth, not striate, whitish, becoming fuliginous, grey or brownish, and blackened in the centre. Stem short, cylindrical, smooth, a little pruinose, whitish, then grey, and at length blackish. Substance white, reddish on exposure to the air, and at length black. Gills adnate-decurrent, unequal, thin, white or with a rosy tint.

On the ground. Kew Gardens. (G. M.)

It resembles *R. nigricans*, but differs in being smaller, the gills thinner, and more numerous. Sometimes confounded with *R. adusta*, from which it differs in the flesh turning red on exposure, probably only a variety of the latter.

Russula mustelina, *Fr. Hym. Eur.*, 441.

Pileus equally fleshy, firm, convex, then depressed, opaque, margin reflexed, even; stem solid, firm, pallid; gills rounded-adnexed, crowded, connected, white, a few dimidiate.—*Krombh.*, t. 61, f. 8, 9.

Under horse chestnut trees. Kew Gardens, Oct., 1886. (G. M.)

Russula expallens, *Gillet Champ., France, ser. vii.*

Pileus fleshy, firm, convex, more or less depressed, viscid when moist, bright purple, purple black in the centre (6-8 cm. broad), when growing old this colour disappears, except on the disc; the cuticle is separable; flesh purplish underneath; stem cylindrical, firm, equal, or a little thickened towards the base, purplish, with a mealy bloom (5-8 cm. long, 2 cm. thick); gills pale yellow, forked at the base, widening outwards.

Under trees. Kew Gardens. (G. Masee.)

Differs from *R. drimeia*, Cke., in the white spores, yellowish flesh, different coloured gills and pruinose stem, and it is less intensely acrid. The former species has been found again this year in Arboretum, Kew Gardens, and near Carlisle.

Russula azurea, *Bresadola Fungi Trid.*, t. 24.

Pileus fleshy, convex, then flattened or depressed, soon dry, even, then minutely granulose; margin scarcely striate when old, blue grey (amæne cæruleus?); margin sometimes lilac, growing pale; cuticle separable (4-6 cm. broad). Stem white, ventricose or clavate at the base, smooth, rather rugulose, firm, spongy within,

rather hollow when old (4-5 cm. long, 10-15 mm. thick). Flesh white, *mild*. Gills crowded, equal, rarely with dimidiate intermixed, attenuated behind and adnexed, white, unchanging. Spores subglobose, echinulate $9 \times 8 \mu$.

On the ground, under trees. Kew Gardens. Edible.

Russula elegans, *Bresadola Fungi Trident*, t. 25.

Pileus fleshy, thin, convex, then somewhat depressed; margin when old tuberculose-striate, *viscid*, bright rosy flesh-colour, soon tinged with ochre in the circumference, wholly densely granulate (3-5 cm. broad). Stem spongy, stuffed, then hollow, thickened at the base, white, afterwards ochraceous below, rather rugulose (3-5 cm. long, 1 cm. thick). Flesh white, ochrey when old, *acid*. Gills attenuated behind, adnexed, or slightly rounded, much crowded, equal, rarely a little furcate, whitish, with age becoming ochraceous orange. Spores spherical, echinulate ($8-10 \mu$ diam.).

On the ground. Kew Gardens. (G. M.).

Russula serotina, *Quelet Soc. Bot. Fr.*, 1878, p. 289, t. 3, f. 11.

Pileus globose, a little flattened (2-3 cm.), purplish-bistre or olive. pruinose with white; margin lilac, with the extreme edge whitish. Stem wrinkled, mealy. Flesh tough, white, and peppery. Gills crowded, white, with a tinge of yellow. Spores ovoid, rough (7μ diam.).

Under beech. Arboretum, Kew, Oct., 1886. (G. M.).

Boletus fulvidus, *Fries Hym. Eur.*, 517.

Pileus convexo-plane, rigid, as well as the stem, which is stuffed, then hollow, equal, firm, even, *smooth, shining, growing dusky*; flesh white, then yellowish; tubes free, elongated; pores white, then lemon-yellow.

Under trees. Arboretum, Kew, Sept., 1886. (G. M.).

Lasiosphaeria sulphurella, *Sacc. Syll.*, II., 202.

Perithecia gregarious, adnato-superficial, globose then conoid ($\frac{1}{2}-\frac{2}{3}$ mm. diam.), clad with a sulphur-coloured velvety down; ostiola short, papillate, black; texture cellular, yellow, then greenish, denser, radiating and smoky at the ostiolum; asci cylindrical, shortly stipitate ($180 \times 16-10 \mu$), octosporous. Sporidia vermicular, curved ($60 \times 4-5 \mu$), rounded at the ends, with a filiform appendage ($25-30 \mu$ long), 4-5 nucleate, hyaline, rarely inflated at the apex.

On decorticated wood. Kew Gardens, Aug., 1886. (G. M.).

Allied to *L. ovina*, from which it differs chiefly in the sulphury colour of the downy coating.

Epicoccum diversisporum, *Preuss. Linn.*, xxv., 740.

Minute, gregarious, seated on rosy spots, stroma globose, dark purple, purple within, irregularly cellular, vesiculose; conidia crowded, variable in size, some tetrahedral, others rounded, not reticulated, verrucose, brown; verrucae darker, pedicels white.—*Sacc. Syll.*, iv., 741.

On leaves of reeds, &c. River side, Kew. (G. M.).

Spores $6-9 \mu$ diam.

INDEX LICHENUM BRITANNICORUM.

(According to the most recent Nylanderian Arrangement.)

BY THE REV. J. M. CROMBIE, F.L.S.

PART I. *(Continued).*Tribe VI. **CLADONIEI**, *Nyl.*Genus I. **PYCNOTHELIA** (*Ach.*), *Duf.*

- Sp. 1 *P. papillaria* (*Ehrh.*), *Duf.*
 f. 1, molariformis (*Hffm.*), *Nyl.*
 2 *P. apoda*, *Nyl.*

Genus II. **CLADONIA** (*Hil.*), *Nyl.*A *Phæocarpæ*.a. *Macrophyllinæ*.

- Sp. 1 *Cl. endiviæfolia* (*Dcks.*), *Fr.*
 2 *Cl. aleicornis* (*Lghft.*), *Flk.*
 f. 1, gracilescens, *Cromb.*
 3 *Cl. firma*, *Nyl.*

b *Microphyllinæ*.† *Scyphiphoræ*.

- 4 *Cl. pyxidata* (*L.*), *Fr.*
 f. 1, *lophyra* (*Ach.*), *Cöem.*
 2, *epiphylla* (*Ach.*), *Nyl.*
 β. *pocillum* (*Ach.*), *Fr.*
 γ. *chlorophæa*, *Flk.*
 f. 1, *lepidophora*, *Flk.*
 2, *myriocarpa*, *Cöem.*
 5 *Cl. leptophylla* (*Ach.*), *Flk.*
 6 *Cl. pityrea*, *Flk.*
 f. 1, *hololepis*, *Flk.*
 7 *Cl. acuminata* (*Ach.*), *Norrl.*
 8 *Cl. Lamarckii* (*Del.*), *Nyl.*
 β. *Isignyii* (*Del.*), *Nyl.*
 9 *Cl. cariosa*, *Flk.*
 10 *Cl. fimbriata*, *Hffm.*
 f. 1, *denticulata*, *Flk.*
 2, *pterygota*, *Flk.*
 3, *conista* (*Ach.*), *Nyl.*
 β. *tubæformis* (*Hffm.*), *Fr.*
 f. 1, *exigua* (*Huds.*), *Cromb.*
 2, *macra* (*Ach.*), *Cromb.*
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 * *Cl. fibula* (*Ach.*), *Nyl.*
 f. 1, *abortiva* (*Flk.*), *Cromb.*
 β. *subcornuta*, *Nyl.*
 f. 1, *nemoxyna* (*Ach.*), *Nyl.*

- 2, tortuosa (*Del.*), *Nyl.*
 γ. radiata (*Schreb.*), *Nyl.*
- 11 *Cl. gracilis* (*L.*), *Hffm.*
 f. 1, abortiva, *Schær.*
 2, aspera, *Flk.*
 β. hybrida (*Hffm.*), *Schær.*
 * *Cl. gracillima*, *Norr.*
- 12 *Cl. cornuta* (*L.*), *Fr.*
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- 13 *Cl. ochrochlora*, *Flk.*
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- 14 *Cl. verticillata* (*Hffm.*), *Flk.*
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- 15 *Cl. cervicornis* (*Ach.*), *Schær.*
 f. 1, stipata, *Nyl.*
- 16 *Cl. sobolifera* (*Del.*), *Nyl.*
- 17 *Cl. macrophylla* (*Schær.*), *Nyl.*
- 18 *Cl. degenerans*, *Flk.*
 f. 1, haploteca (*Ach.*), *Flk.*
 2, granulifera, *Cromb.*
 3, pleolepidea, *Nyl.*
 β. anomæa (*Ach.*), *Flk.*
 * *Cl. trachyna* (*Ach.*), *Nyl.*
 f. 1, subfurcata, *Nyl.*
 ** *Cl. coralloidea* (*Ach.*), *Nyl.*
- 19 *Cl. lepidota* (*Ach.*), f. hypophylla, *Nyl.*
 †† *Ascyphæ.*
- 20 *Cl. turgida* (*Ehrh.*), *Hffm.*
- 21 *Cl. furcata*, *Hffm.*
 f. 1, exilis, *Mudd.*
 β. corymbosa, *Ach.*
 γ. spinosa (*Huds.*), *Hook.*
 * *Cl. racemosa* (*Hffm.*), *Nyl.*
 f. 1, recurva (*Hffm.*), *Nyl.*
 2, palamæa (*Ach.*), *Nyl.*
- 22 *Cl. pungens* (*Ach.*), *Flk.*
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 * *Cl. muricata* (*Del.*), *Cromb.*
- 23 *Cl. crispata* (*Ach.*), *Nyl.*
 * *Cl. furcatiformis*, *Nyl.*
- 24 *Cl. cenotea* (*Ach.*), *Schær.*
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- 25 *Cl. scabriuscula* (*Del.*), *Nyl.*
- 26 *Cl. squamosa*, *Hffm.*
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 2, cucullata (*Del.*), *Nyl.*
 * *Cl. adspersa* (*Flk.*), *Nyl.*
- 27 *Cl. subsquamosa*, *Nyl.*
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- 28 *Cl. asperella* (*Flk.*), *Cromb.*
 f. 1, *polychonia* (*Flk.*), *Cromb.*
- 29 *Cl. cæspiticia*, *Flk.*
- 30 *Cl. delicata* (*Ehrh.*), *Flk.*
- B *Erythrocarpæ.*
- 31 *Cl. coccifera* (*L.*), *Schær.*
 f. 1, *asotea*, *Ach.*
 2, *cornucopioides*, *Ach.*
 β. *incrassata* (*Flk.*), *Fr. fil.*
 * *Cl. pleurota* (*Flk.*), *Cromb.*
- 32 *Cl. bellidiflora* (*Ach.*), *Schær.*
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- 34 *Cl. digitata* (*L.*), *Hjfm.*
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 2, *monstrosa* (*Ach.*), *Nyl.*
- 35 *Cl. macilenta* (*Ehrh.*) *Hjfm.*
 f. 1, *styracella* (*Ach.*), *Nyl.*
 2, *clavata* (*Ach.*), *Fr.*
 3, *scolceina* (*Ach.*), *Nyl.*
 β. *scabrosa* (*Mudd.*), *Nyl.*
 f. 1, *intumescens*, *Cromb.*
 γ. *coronata* (*Ach.*), *Nyl.*
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- 36 *Cl. bacillaris* (*Ach.*), *Nyl.*
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- 37 *Cl. Flörkeana*, *Fr.*
 f. 1, *trachypoda*, *Nyl.*
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- Sp. 1 *Cl. rangiferina* (*L.*), *Nyl.*
 f. 1, *gigantea* *Bory.*), *Nyl.*
- 2 *Cl. sylvatica* (*Hjfm.*), *Nyl.*
 f. 1, *tenuis*, *Lamy.*
 2, *lacerata* (*Del.*), *Nyl.*
 3, *grandis* (*Flk.*), *Cromb.*
 4, *portentosa* (*Duf.*), *Leight.*
 β. *alpestris* (*L.*), *Nyl.*
 f. 1, *pumila* (*Ach.*), *Leight.*
- 3 *Cl. uncialis* (*L.*), *Nyl.*
 f. 1, *bolacina* (*Ach.*), *Cromb.*
 2, *adunca* (*Ach.*), *Cromb.*

- 3, obtusata (*Ach.*), *Nyl.*
 4, turgescens (*Fr.*), *Cromb.*
 4 *Cl. amauroceræa* (*Flk.*), *Nyl.*
 * *Cl. dstricta*, *Nyl.*

Series III. **Ramalodei**, *Nyl.*

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Genus I. **ROCCELLA**, *D'C.*

- Sp. 1 *R. phycopsis*, *Ach.*
 2 *R. fuciformis* (*L.*), *Ach.*
 f. 1, tenuior, *Nyl.*

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- Sp. 1 *Th. vermicularis* (*Sw.*), *Schær.*
 β. taurica (*Wulf.*), *Schar.*

Tribe IX. **RAMALINEI**, *Nyl.*

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- a. Stirps, R. gracilis.*
 Sp. 1 *R. thrausta* (*Ach.*), *Nyl.*
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 2 *R. calicaris* (*Hffm.*), *Nyl.*
 β. subampliata, *Nyl.*
 γ. subfastigiata, *Nyl.*
 3 *R. farinacea* (*L.*), *Ach.*
 f. 1, pendulina, *Ach.*
 2, *phalerata*, *Ach.*
 * *R. intermedia* (*Del.*), *Nyl.*
 4 *R. fraxinea* (*L.*), *Ach.*
 β. ampliata, *Ach.*
 f. 1, monophylla, *Cromb.*
 γ. calicariformis, *Nyl.*
 5 *R. fastigiata* (*Pers.*), *Ach.*
 f. 1, minutula (*Ach.*), *Fr. fil.*
 6 *R. polymorpha*, *Ach.*
 β. emplecta, *Ach.*
 * *R. capitata* (*Ach.*), *Nyl.*
 7 *R. pollinaria* (*Westr.*), *Ach.*
 f. 1, humilis, *Ach.*
 c. Stirps, R. maciformis.
 8 *R. evernioides*, *Nyl.*
 f. 1, monophylla, *Cromb.*
 d. Stirps, R. scopulorum.
 9 *R. scopulorum* (*Retz.*), *Ach.*
 β. incrassata, *Nyl.*
 10 *R. subfarinacea*, *Nyl.*

- 11 *R. cuspidata* (*Ach.*), *Nyl.*
 f. minor, *Nyl.*
 β. crassa (*Del.*), *Nyl.*
 * *R. breviuscula*, *Nyl.*
 f. 1, gracilescens, *Cromb.*
 12 *R. Curnowii*, *Cromb.*
 13 *R. geniculata*, *Tayl.*
 14 *R. minuscula*, *Nyl.*

Tribe X. **USNEI**, *Nyl.*Genus I. **USNEA** (*Dill.*), *Ach.*

- Sp. 1 *U. florida* (*L.*), *Ach.*
 2 *U. hirta* (*L.*), *Nyl.*
 3 *U. dasypoga* (*Ach.*), *Nyl.*
 β. plicata (*Ach.*), *Nyl.*
 γ. scabrata, *Nyl.*
 4 *U. ceratina* (*Ach.*), *Nyl.*
 β. scabrosa, *Ach.*
 f. 1, ferruginascens, *Cromb.*
 5 *U. articulata* (*L.*), *Kbr.*
 f. 1, intestiniiformis, *Ach.*

Tribe XI. **ALECTORIEI**, *Nyl.*Genus I. **ALECTORIA** (*Ach.*), *Nyl.*

- a. *Stirps, A. ochroleucæ.*
 Sp. 1 *A. ochroleuca* (*Ehrh.*), *Nyl.*
 b. *Stirps, A. jubatæ.*
 2 *A. divergens* (*Ach.*), *Nyl.*
 3 *A. nigricans* (*Ach.*), *Nyl.*
 4 *A. jubata* (*L.*), *Nyl.*
 β. lanestris, *Ach.*
 f. 1, tenerrima, *Cromb.*
 * *A. chalybeiformis*, *L.*
 * *A. subcana*, *Nyl.*
 5 *A. implexa* (*Hffm.*), *Nyl.*
 6 *A. bicolor* (*Ehrh.*), *Nyl.*

Tribe XII. **CETRARIEI**, *Nyl.*Genus I. **CETRARIA** (*Ach.*), *Nyl.*

- Sp. 1 *C. Islandica*, *L.*
 f. 1, platyna (*Ach.*), *Nyl.*
 2 *C. crispa* (*Ach.*), *Nyl.*
 f. 1, subtubulosa (*Fr.*), *Nyl.*
 3 *C. hiascens* (*Fr.*), *Fr. fil.*
 4 *C. aculeata* (*Schreb.*), *Fr.*
 f. 1, hispida (*Lghft.*), *Cromb.*
 2, *acanthella* (*Ach.*), *Nyl.*
 5 *C. odontella*, *Ach.*

- Genus* II. PLATYSMA (*Hffm.*), *Nyl.*
 a. *Stirps*, *Pl. nivalis*.
 Sp. 1 *Pl. nivale* (*L.*), *Nyl.*
 2 *Pl. cucullatum* (*Bell.*), *Nyl.*
 b. *Stirps*, *Pl. sæpincolæ*.
 3 *Pl. sæpincola* (*Ehrh.*), *Nyl.*
 4 *Pl. ulophylla* (*Ach.*), *Nyl.*
 5 *Pl. diffusum* (*Webr.*), *Nyl.*
 6 *Pl. Fahlunense* (*L.*), *Nyl.*
 7 *Pl. polyschizum*, *Nyl.*
 c. *Stirps*, *Pl. commixti*.
 8 *Pl. commixtum*, *Nyl.*
 d. *Stirps*, *Pl. juniperini*.
 f. 1, *tennisectum* (*Fr. fil.*), *Cromb.*
 9 *Pl. juniperinum* (*L.*), *Nyl.*
 * *Pl. pinastri* (*Scop.*), *Nyl.*
 c. *Stirps*, *Pl. glauci*.
 10 *Pl. glaucum* (*L.*), *Nyl.*
 f. 1, *fallax*, (*Webr.*), *Nyl.*
 2, *coralloideum* (*Wallr.*), *Leight.*
 3, *ampullaceum* (*L.*), *Hffm.*
 4, *tenuisectum*, *Cromb.*
 11 *Pl. lacunosum* (*Ach.*), *Nyl.*
 (*To be continued.*)

HANDBOOK OF BIRMINGHAM.

This Handbook, prepared for the members of the British Association by a local committee, is a step in the right direction. Part V. is devoted to Botany, under the general superintendence of W. Mathews, M.A. The list of Flowering Plants and Ferns compiled by J. E. Bagnall, A.L.S., as also that of the Mosses, Hepaticæ, and Lichens, the Algæ by A. W. Wills, and the Fungi by W. B. Grove, B.A. Although we cannot admire the plan adopted for the Flowering Plants, the list is the most complete of the noteworthy plants. The other sections are starved out for lack of space. Nevertheless the idea is a good one, and there is no reason why, in similar attempts, more complete lists should not be given, exclusive perhaps of the generally distributed species which are found all over the islands. We have been assured that the individual authors of the several communications are not responsible for their bareness. Fourteen small sized pages for all the Cryptogamia, including introductory matter, is a ridiculously small space, unless it be taken into account what an enormous field the whole "Handbook" was designed to cover, of Topography, Education, Art Manufactures, Archæology, Geology, Petrography, Zoology, Botany, and an Appendix of Sundries, to be included in less than 400 of 12mo pages.

PRÆCURSORES AD MONOGRAPHIA POLYPORORUM.

By M. C. COOKE.

(Concluded from p. 27.)

The following additions and corrections should be made to the preceding lists, and a compressed synonymy is appended, in so far as it may be available for practical purposes. An extended and complete synonymy would involve considerable labour, which could scarcely be justified. As some of the species are distributed through the genera without our having seen authentic specimens, and on the faith of the descriptions, their position is subject to consideration. An arrangement of such an extent as this attempt could hardly be expected to attain perfection, which can only be secured by the co-operation of many minds.

* *Species Transferred.*

- 78 *Polyporus glomeratus*, *Peck*, to be struck out; see *Polystictus radiatus*, No. 747.
 82 Is *P. abortivus*, *Peck* = *P. distortus*, *Schwz*, No. 158.
 127 *Polyporus sanguineus*, *Fr.*, should be transferred to *Polystictus*, No. 663.
 148 *Polyporus Beatiei*, *Bunn.*, is probably the same as *P. Berkeleyi*, *Fr.* No. 154.
 189 *Polyporus molliusculus*, *Berk.*, should be placed in *Stuposi*, No. 717.
 259 var. *isabellinus*, *Schw.*, is probably rather a variety of *P. adustus*, *Fr.*
 402 *Fomes anthracophilus*, *Cke.*, should stand as *Polyporus anthracophilus*, *Cke.* No. 165.
 470 Add to *Fomes marmoratus*, *B. & C.*, *Proc. Amer. Acad. Sci.* iv. 122.
 764 *Polystictus Lindbladii*, *Berk.*, should be deleted here, and stand as *Poria Lindbladii*, *B.* No. 1008.
 924 *Polystictus tennis*, *Link.*, add. *Berl. Mag. Ges. Nat. Freunde* iii. 1809, vii. (1816), p. 25.
 231 Probably *P. dryophilus*, *Berk.*, should be transferred to *Suberosi*, No. 302.*

** *Species to be added.*

- 78 *Polyporus megaloporus*, *Mont. Syll.* p. 155.
 99* *Polyporus Beccarianus*, *Ces. Myc. Born.* 4.
 127 *Polyporus hypomelanus*, *Berk. in Herb.* No 2663.
 174* *Polyporus maculatus*, *Peck 26th Report N.Y. Mus.* 69.
 190* *Polyporus cerebrinus*, *B. & Br. Ann. Nat. Hist.* No. 1800.
 205* *Polyporus vivax*, *Berk. Hook. Journ.* 1862, 140.
 209* *Polyporus delectans*, *Peck 26th Report N.Y. Mus.*
 229* *Polyporus aurantiacus*, *Peck 26th Report N.Y. Mus.* 69.
 239 } The identity of *P. gilvus*, *Schw.*, and *P. scruposus*, *Fr.*,
 240 } must be left to individual judgment.

- 320* *Polyporus detritus*, *Berk. Hook. Journ.* 1846, 197.
 322* *Polyporus Holmiensis*, *Fr. Hym. Eur.* 544.
Polyporus cadaverinus, *Fr. Hym. Eur.* 544.
 324* *Polyporus imberbis* (*Bull.*), *Fr. Hym. Eur.* 544.
Polyporus heteroclitus (*Bolt.*), *Fr. Hym. Eur.* 544.
 386* *Fomes pes-simiae*, *Berk. Hook. Journ.* 1856, 194.
 390* *Fomes pala*, *Lev. Ann. Sci. Nat.* 1844, 183.
 395* *Fomes coffeatus*, *Berk. Ann. Nat. Hist.* 1839, 385.
 398* *Fomes conglobatus*, *Berk. Hook. Journ.* 1845, 303?
 415* *Fomes cinnamomeus* (*Trog.*), *Fr. Hym. Eur.* 561.
 431* *Fomes fraxinophilus*, *Peck Bot. Gaz.* 1872, p. 43.
 Authentic specimens prove that it can be no form of
F. fraxineus, No. 541.
 440* *Fomes cremorinus*, *Ces. Myc. Born.* 5.
 445* *Fomes piceus*, *Ces. Myc. Born.* 5.
 476* *Fomes holomelanus*, *Berk. in Herb.* No. 2605.
 512* *Fomes lineato-scaber*, *Berk. Linn. Trans.* (n.s.) ii. p. 59.
 529* *Fomes melanoporoides*, *Ces. Myc. Born.* 6.
 536* *Fomes compressus*, *Berk. Hook. Journ.* 1845, 53.
 566* *Fomes spongiosus*, *Pers. Syn.* 543.
 572* *Fomes tenax*, *Lev. Ann. Sci. Nat.* 1863, 295.
Fomes epimiltinus, *B. & Br. Linn. Journ.* xiv. 54.
 599* *Polystictus eriopus*, *Ces. Myc. Born.* 5.
 604* *Polystictus apophysatus*, *Rostk. Poly.* 27, t. 4.
 675* *Polystictus dædalea*, *Schwein. (ubi?) in Herb. Berk.*
 692* *Polystictus venetus*, *Sacc. Myc. Ven.* 52, t. 7, f. 4-6.
 806* *Polystictus Parishii*, *Berk. in Herb.* No. 2593.
 854* *Polystictus vinosus*, *Berk. Ann. Nat. Hist.* 1852, 195.
 888* *Polystictus cæsiellus*, *Ces. Myc. Born.* 6.
 940* *Polystictus Fendzleri*, *Berk. Linn. Journ.* x. 317; if not
 identical with *P. undatus*, *Pers.*
 1039* *Poria tulipiferae*, *Schwz. Syn. Car.* No. 935.
127. *Polyporus hypomelanus*, *Berk. in Herb.* No. 2663.
 Pileo reniformi vel suborbiculari, lavi, glabro, rufo-ochraceo (1
 in. diam.). Stipite abbreviato vel obsoleto, sæpe vertice affixo.
 Substantia pallido, tenui, hymenio atro, poris mediis ($\frac{1}{3}$ mm.)
 angularibus, subæqualibus.
 On trunks. Grey River; New Zealand.
476* *Fomes holomelanus*, *Berk. in Herb.* No. 2605.
 Pileo minuto ($\frac{1}{2}$ – $\frac{3}{4}$ in. diam.), duro, unguato, atro, glabro,
 leniter concentricè sulcato, plerumque radiato-rugoso; contextu
 fulvo-ferrugineo, tubulis elongatis, poris pallido-umbrinis, minutis.
 On trunks. Panuré (Spruce).
806* *Polystictus Parishii*, *Berk. in Herb.* No. 2593.
 Pileo coriaceo, tenui, reniformi, vel semiorbiculari, glabrescente,
 pallide cinereo, zonis purpureis concentricè ornato (2 in. diam.),
 contextu albo, margine acuto, subtus sterili, poris rotundatis,
 minimis, æqualibus.
 On trunks. Moulmein.

* * *Species doubtful, or of uncertain place.*

- Polyporus** acerinus, *Opiz. Seznam*, 137.
 „ byssinus, *Pers. Myc. Eur.* ii. 122.
 „ brunneus, *Schwein. (ubi?) in Herb. Berk.*
 „ canalium, *Lour. Coch.* ii. 693, *Fr. S. M.* i. 352.
 „ cephalotes, *Pers. Myc. Eur.* ii. 118.
 „ cerasi, *Rostk. Poly.* t. 61.
 „ citrinellus, *Berk. & Curt. in Curt. Cat.*
 „ citromallus, *B. & Curt. in Herb.* 2534 (*Cuba*), too
 imperfect for description.
 „ cribrosus, *Pers. Myc. Eur.* ii. 96.
 „ decrescens, *Zoll. Arch. Neerl. Ind.* i. 387.
 „ dispar, *Kalch. in Grev.* x. 101.
 „ echinatus, *Pers. Myc. Eur.* ii. 162.
 „ encephalum, *Hoffm. Veg. Subter.*
 „ foliaceus, *Pers. Myc. Eur.* ii. 121.
 „ furcatus, *Jungh. Fl. Java* 69 (? *Fomes*).
 „ Gordoni, *B. & Br. in Herb.* 2380 (abnormal).
 „ hæmatinus, *Berk. in Herb.* 2517 (*India*) insufficient.
 „ hepatites, *B. & C. in Herb.* 2406 (*Venezuela*), nearly
 destroyed by insects.
 „ Humboldtii, *Pers. Myc. Eur.* ii. 120.
 „ incompletus, *Ces. Myc. Born.* 5.
 „ insularis, *Pers. Myc. Eur.* ii. 113.
 „ laburni, *Opiz. Seznam.* 136.
 „ latus, *Fr. Syst. Myc.* i. 384.
 „ luteoporus, *Opiz. Lotus.* 1855, 87.
 „ minimus, *Jungh. Fl. Java* 64 (*Laschia?*).
 „ Notarisii, *Berk. in Herb.* 2918 = *P. reticulatus*, *De*
 Not. vix Fries.
 „ odontoporus, *Kalch. (ubi?) Poria, in herb.* 2929.
 „ ostrea, *Pers. Myc. Eur.* ii. 119.
 „ oxyporus, *Sauter in Hedwigia* 1876, 150.
 „ palmatus, *Sauter in Hedwigia* 1876, 151.
 „ pellucidus, *Fr. Syst. Myc.* i. 352.
 „ planus, *Wallr. Fl. Germ.* ii. 602.
 „ polychrous, *Ces. Myc. Born.* 5, including several
 species
 „ polystictus, *Pers. Myc. Eur.* ii. 111.
 „ pustulosus, *Zoll. Arch. Neerl. Ind.* i. 387.
 „ ruber, *Pers. Myc. Eur.* ii. 43.
 „ Scopolii, *Pers. Myc. Eur.* ii. 120.
 „ scutatus, *Pers. Myc. Eur.* ii. 85.
 „ semipellucidus, *Zoll. Arch. Neerl. Ind.* ii. 291.
 „ Steinheilianus, *Berk. & Lev. Ann. Sci. Nat.* 1846
 (*fide Streinz Nomenclator*).
 „ stenoloma, *Kalch. & McOw. (ubi?)*.
 „ strobiliformis, *Fr. Syst. Myc.* i. 352.
 „ turritus, *Pers. Myc. Eur.* ii. 117.
 „ versipellis, *Pers. Myc. Eur.* ii. 96.

Polyporus vilis, *Ces. Myc. Born.* 6 (exolate).

„ *voluta*, *Pers. Myc. Eur.* ii. 119.

„ *Zeyheri*, *Berk. in Herb.* 2776 (insufficient).

*** *Some synonyms.*

aculeatus, *Mont. Ann. Sci. Nat.* 1840, 205 = *Hexagona*.

agariceus, *Berk. Ann. Nat. Hist.* x. 371 = *arcularius*, *Fr.* 47.

agilis, *Viviani t.* 57 = *virellus*, *Fr.* 20.

albellus, *Peck 30th Report p.* 45 = *betulinus*, *Fr.* 304.

albido-fuscus, *Secr. Myc. Suis.* iii. 67 = *petaloides*, *Fr.* 120.

albidus, *Sow. Fung. t.* 226 = *cæsius*, *Fr.* 204.

albidus, *Wahl. Fl. Lapp.* 531 = *pallescens*, *Fr.* 210.

albus, *Bolt. Fung. t.* 78 = *salignus*, *Fr.* 322.

alutaceus, *Rostk. t.* 27 = *destructor*, *Fr.* 211.

alveolarius, *Rostk. xxviii. t.* 15 = *arcularius*, *Fr.* ? 47.

amaricans, *Pers. Syn.* 531 = *imbricatus*, *Fr.* 175.

angulatus, *Pers. Myc. Eur.* ii. 72 = *zonatus*, *Fr.* 791.

anisopilus, *Lev. Ann. Sci. Nat.* 1844, 191 = *pubescens*, *Fr.* 291.

annosus, *Fr. Elen.* 106 = *roburneus*, *Fr.* 473.

annulatus, *Jungh. Fl. Java* 53 = *annularis*, *Fr.* 122.

antilopum, *Kalch. in Grev.* = *vibecinus*, *Fr.* 118.

apalus, *Berk. Hook. Journ.* 1843, 635 = *flexipes*, *Fr.* 55.

argenteus, *Ehr. Bor. p.* 27 = *adustus*, *Fr.* 253.

argyraceus, *Pers. Myc. Eur.* ii. 73 = *versicolor*, *Fr.* 770.

armeniaceus, *Berk. Eng. Fl.* v. 147 = *amorphus*, *Fr.* 260.

Armitii, *Muell. & Kalch. Grev.* x. 94 = *stipitarius*, *Fr.* 64.

artemidorus, *Lenz. f.* 43 = *confluens*, *Fr.* 145.

aurantiacus, *Rostk. iv. t.* 58 = *spongiosus*, *Fr.* 566.*

aurantius, *Scheff. t.* 108, 110 = *confluens*, *Fr.* 145.

aurantius, *Trog. Flora* 1852, 354 = *confluens*, *Fr.* 145.

aureolus, *Pers. Myc. Eur.* ii. 60 = *amorphus*, *Fr.* 260.

aurea, *Ces. Myc. Born.* 5, potius *Trametes*.

badius, *Weinm. Ross.* 311 = *varius*, *Fr.* 90.

balsamiferæ, *Klot. Linn.* 1833 = *biformis*, *Fr.* 714.

Barteri, *Berk. in Herb.* = variety of *biformis*, *Fr.*

Beyrichii, *Fr. Linn.* v. 578 = *Trametes*.

bibulus, *Pers. Myc. Eur.* 135 = *medulla-panis*, *Fr.* 956.

Boltoni, *Rostk. xxviii. t.* 24 = *varius*, *Fr.* 99.

bombycinus, *Wirtg. Flora* 1835 = *Wirtgeni*, *Fr.* 1016.

botulatus, *Secr. Myc. Suis.* iii. 80 = *fulvus*, *Fr.* 474.

Boucheanus, *Fr. Epicr.* 438 = *Favolus*.

Brisbanensis, *Berk. & Br.* = *Trametes ochroleucus*, *B.*

brumalis, *Rostk. iv. t.* 5 = *ciliatus*, *Fr.* 49.

brunneo leucus, *Berk. Hook. Journ.* v. 4 = *brunneo albus*, *Fr.* 804.

brunneus, *Pers. Myc. Eur.* ii. 95 = *violaceus*, *Fr.* ? 1071.

byssina, *Secr. Myc. Suis.* iii. 175 = *reticulata*, *Fr.* 1120.

calceolus, *Bull. Champ. t.* 360 = *elegans*, *Fr.* 101.

candidus, *Pers. Myc. Eur. t.* 15, f. 2 = *chioneus*, *Fr.* 209.

captiosus, *Mont. Ann. Sci. Nat.* 1847, 170 = *Trametes*.

carneofulvus, *Berk. in Novæ Symb.* 52 = *omalopilus*, *Mont.* 562.

- carolinensis, *Berk. Hook. Journ.* 1849 = biformis, *Fr.* 714.
 carpineus, *Sow. Fung.* t. 231 = adustus, *Fr.* var. 253.
 castaneus, *Rostk.* iv. t. 47 = fuscatus, *Fr.* 771.
 caudicinus, *Scop. Carn.* ii. 469 = sulfureus, *Fr.* 171.
 cellaris, *Lib. Crypt. Exs.* = vaporaria, *Fr.* 1033.
 cellulosus, *Whlbg. Suec.* ii. 961 = vulgaris, *Fr.* 946.
 ceratoniae, *Fr. Hym. Eur.* 552 = sulfureus, *Fr.* 171.
 cervino-plumbeus, *Jungh. Fl. Java* 61 = Hexagona.
 cervinus, *Pers. Myc. Eur.* ii. 87 = *Trametes mollis*, *Fr.*
 cinereo-lutescens, *Pers. Myc. Eur.* ii. 205 = ravidus, *Fr.* 709.
 cinereus, *Lev. Ann. Sci. Nat.* 1846, 140 = cinereus, *Cke.* 777.
 citrinus, *Pers. Syn.* 524 = sulfureus, *Fr.* 171.
 cladonia, *Berk. Hook. Journ.* 1845, 61 = bulbipes, *Fr.* 584.
 cochlear, *Nees. Acta. Cur.* xiii. t. 6 = amboinensis, *Fr.* 373.
 colliculosus, *Pers. Myc. Eur.* ii. 163 = tuberculosus, *Fr.* 962.
 collybioides, *Kalch. Grev.* x. 94 = alveolarius, *Fr.* 56.
 concentricus, *Schum. Saell.* ii. 387 = adustus, *Fr.* 253.
 conchatus, *Quel. Jura* t. 17, f. 5 = pectinatus, *Klot.* 516.
 conchifer, *Schw. Syn. Car.* 918 = virgineus, *Fr.* 642.
 confluent, *Rostk.* iv. t. 34 = resinosus, *Fr.* 295.
 confluent, *Schum. Saell.* 378 = perennis, *Fr.* 581.
 connatus, *Schw. Amer. Bor.* 330 = parvulus, *Kl.* 586.
 cordovensis, *Berk. in Herb.* 2417 = *Favolus rhipidium*, *B.*
 coriaceus, *Bull. Champ.* t. 28 = perennis, *Fr.* 581.
 corium *Kunze. (ubi?) in herb. Berk.* = ferruginosa, *Fr.* 1111.
 coronatus, *Rostk.* xxviii. t. 27 = *Boucheanus*, *Fr.*
 corrugatus, *Pers. in Freyc. Voy.* 172 = scabrosus, *Fr.* 423.
 crassipes, *Curr. Linn. Trans.* 1876, 122 = xanthopus, *Fr.* 602.
 cristatus, *Schaff. Ic.* t. 316, 317 = lobatus, *Fr.* 156.
 cristula (*Klot.*) *Ann. Nat. Hist.* 1839, 387 = cinnabarinus, *Fr.* 742.
 croceus, *Karst. Fin. Poly.* 39 = contiguus, *Fr.* 1113.
 croceus, *Schw. Syn. Car.* 70 = crocipora, *B. & C.* 978.
 cruentus, *Pers. Myc. Eur.* ii. t. 16, f. 4 = incarnatus, *Fr.* 1065.
 cupreo-nitens, *Kalch. Myc. Univ.* 1702 = xanthopus, *Fr.* 602.
 curtipes, *B. & C. Hook. Journ.* 1849, 235 = *Favolus*.
 cuticularis, *Wahlbg. Suec.* 1998 = vulpinus, *Fr.* 754.
 cyathoides, *Quel. Jura* 253 = vernalis, *Fr.* 43.
 dædaleoides, *Berk. Ann. Nat. Hist.* iii. 325 = *Dædalea*.
 debilis, *Wallr. Fl. Germ.* ii. 60 = brumalis, *Fr.* 31.
 dermatodes, *Lev. Voy. Bon.* t. 138; potius = *Hexagona sericea*.
 dilatatus, *Berk. Hook. Journ.* 1846 = *Adami*, *Berk.* 607.
 dilutus, *Berk. in Herb.* No. 2443 = variety of *Nilgherrensis*.
 dimorphus, *Cooke Grer.* xiii. 1 = hemicapnoides, *B. & Br.* 102.
 dolosus, *Pers. Myc. Eur.* ii. 77 = abietinus, *Fr.* 813.
 dryadeus, *Schw. Amer. Bor.* 147 = scruposus, *Fr.* 240.
 dryadeus, *Rostk.* xxvii. t. 9 = applanatus, *Fr.* 453.
 dualis, *Peck 30th Report* 44 = circinatus, *Fr.* 573.
 dubius, *Jungh. in Herb. Lugd.* = australis, *Fr.* 451.
 eburneus, *Wallr. Fl. Germ.* = osseus, *Fr.*
 elegans, *Bolt. Fung.* t. 76 = giganteus, *Fr.* 153.

- elegans, *Trog. Flora* 1832, 593 = varius, *Fr.* 99.
 emerici, *Berk. Grev.* x. 96 = grammocephalus, *B.* 132.
 epigæa, *Lenz.* p. 62 = Schweinitzii, *Fr.* 76.
 epiphyllus, *Pers. Obs.* ii. 15 = molluscus, *Fr.* 947.
 epixanthus, *Rostk. Poly.* t. 30 = alutaceus, *Fr.* 185.
 exasperatus, *Schrad. Spic.* 153 = arcularius, *Fr.* 47.
 fagineus, *Schrad. Spic.* 161 = albus, *Fr.* 241.
 fasciculatus, *Schrad. Spic.* 154 = brumalis, *Fr.* 31.
 favularis, *Fr. Novæ Symb.* 34 = Favolus.
 favus, *Bull. Champ.* t. 421 = *Trametes gallica*, *Fr.*
 Feathermanni, *Rav. Fun. Amer.* = *Trametes*.
 ferreus, *Pers. Myc. Eur.* ii. 89 = floccosus, *Fr.* 1017.
 ferrugineus, *Jungh. in Herb. Ludg.* = Hasskarlii, *Lev.* 889.
 ferruginosus, *Rostk. Poly.* xxvii. t. 6 = umbrinus, *Fr.* 1026.
 fibrillosus, *Karst. Fin. Poly.* 30 = vulpinus, *Fr.* 754.
 fibroso-radians, *Mont. in litt.* = mutabilis, *B.* 609.
 fimbriatus, *Bull. Champ.* t. 254 = pictus, *Fr.* 582.
 flabelliformis, *Pers. Myc. Eur.* ii. 53 = squamosus, *Fr.* 87.
 flabelliformis, *Schæff. Ic.* t. 113 = cristatus, *Fr.* 144.
 flavescens, *Rostk. Poly.* xxviii. t. 23 = melanopus, *Fr.* 90.
 flavus, *Jungh. Fl. Java* 46 = *Irpex flavus*, *Kl.*
 flavus, *Karst. Finn. Poly.* p. 40 = var. of vulgaris, *Fr.* 946.
 fomicola, *B. & C. Linn. Journ.* x. 305 = parvulus, *Kl.* 586.
 foliaceus, *Jungh. in Herb.* = elongatus, *B.* 672.
 fornicatus, *Fr. Epic.* 443 = amboinensis, *Fr.* 373.
 Friburgensis, *Humb. Frib.* 112 = *Trametes odorata*, *Fr.*
 frondosus, *Schrad. Spic.* 21 = intybaceus, *Fr.* 143.
 frustulatus, *Pers. Myc. Eur.* ii. 91 = serialis, *Fr.* 716.
 fugax, *Pers. Ic. Pict.* t. 16 = reticulatus, *Fr.* 1120.
 fulvus, *Schæff. Ic.* t. 262 = pinicola, *Fr.* 412.
 fumosogriseus, *C. & E. Grev.* ix. 103 = adustus, *Fr.* 253.
 fusco-albus, *Jungh. Fl. Java* 52 = *Junghuhnii*, *Fr.*
 fusco-badius, *Pers. Frey. Voy.* 172 = scabrosus, *Fr.* 423.
 fusco-gilvus, *Schwz.* see *Berk.* = radiatus, *Fr.* 747.
 fusco-purpureus (*Pers.*) *Fr. Epic.* 465 = *Trametes badia*.
 fuscus, *Pers. Syn.* 527 = resinosus, *Fr.* 295.
 gallicus, *Fr. Syst. Myc.* i. 345 = *Trametes gallica*, *Fr.*
 gausapatus, *B. & R. in Herb. Berk.* 2696 = *Trametes*.
 gibbosa, *Wahlbg. Ups. sec. Fries* = borealis, *Fr.* 286.
 gibbosus, *Nees. Acta. Cur.* xiii. t. 5 = amboinensis, *Fr.* 373.
 giganteus, *Fl. Dan.* t. 1793 = intybaceus, *Fr.* 143.
 giganteus, *Harz.* t. 32 = squamosus, *Fr.* 87.
 gilvus, *Mont. nec. Fries* = scruposus, *Fr.* 240.
 glomeratus, *Peck 24th Report* 78 = radiatus, *Fr.* 747.
 gonoporus, *Jungh. in Herb. Ludg.* = *Persoonii*, *Fr.* 850.
 gracilis, *Klot. Ann. Nat. Hist.* 1839 = flexipes, *Fr.* 55.
 hæmatoides, *Rostk.* iv. t. 62 = rufus, *Fr.* 997.
 Halesiæ, *B. & C. Grev.* i. 52 = amorphus, *Fr.* 260.
 helvolus, *Fr. Nova Symb.* 63 = *Trametes*.
 Herbergii, *Rostk. Poly.* xxix. t. 18 = cuticularis, *Bull.* 263.

- heteroclitus, *Sow. Fung.* t. 367 = ravidus, *Fr.* 709.
 hexagonoides, *Fr.* = *Trametes*.
 hispidioides, *Peck 23rd Report* p. 21 = cuticularis, *Bull.* 263.
 hispidus, *Rostk. Poly.* t. 31 = vulpinus, *Fr.* 754.
 Hodgekinsoniae, *Kalch. Grer.* x. 96 = elongatus, *B.* 672.
 holoporus, *Pers. Myc. Eur.* ii. 107, t. 6, f. 3, 4 = xanthus, *Fr.* 1060.
 hydnoides, *Fr. Elen.* i. 107 = *Trametes*.
 igniarius, *Bolt. Fung.* t. 80 = cinnamomeus, *Fr.* 415.*
 igniarius, *Fl. Dan.* t. 953 = pinicola, *Fr.* 412.
 impuber, *Sow. Fung.* t. 195 = gilvus, *Schw.* 239.
 incanus, *Lev. Ann. Sci. Nat.* 1846, 130 = *Trametes*.
 incarnatus, *Schum. Fl. Saell.* ii. 391 = abietinus, *Fr.* 813.
 incertus, *Curr. Linn. Trans.* 1876, 123 = *Trametes*.
 incertus, *Pers. Myc. Eur.* 377 = vaporaria, *Fr.* 1033.
 inconspicuus, *Miq. Bull. Neerl.* 1839, 454 = Hostmanni, *B.* 658.
 incrustans, *Pers. Myc. Eur.* i. 94 = obliquus, *Fr.* 568.
 indigestus, *Berk. in Herb.* = *Trametes scleromyces*, *Berk. & Warm.*
 informis, *Cum. Acta. Taurin.* = lobatus, *Fr.* 156.
 infundibuliformis, *Pers. Syn.* 526 = melanopus, *Fr.* 90.
 infundibuliformis, *Rostk.* t. 27 = Rostkovii, *Fr.* 93.
 intermedius, *Rostk. Poly.* iv., t. 33 = arcularius, *Fr.* ? 47.
 intybaceus, *Berk. Hook. Journ.* i. 149 = cichoraceus, *B.* 892.
 irregularis, *Sow.* t. 423 = amorphus, *Fr.* 260.
 irpex, *Schulz. in Fries* = Schulzeri, *Fr.* 315.
 irregularis, *Sow. Fung.* t. 423 = amorphus, *Fr.* 260.
 isabellinus, *Schweiz. Amer. Bor.* 899 = adustus, *Fr.* 253.
 isidioides, *Berk. Hook. Journ.* 1843, 515 = var. scruposus, *Fr.* 240.
 japonicus, *Thunb. Fl. Jap.* t. 39 = amboinensis, *Fr.* 373.
 juglandis, *Pers. Myc. Eur.* ii. 53 = squamosus, *Fr.* 87.
 juglandis, *Schaff. Icon.* t. 101, 102 = squamosus, *Fr.* 87.
 Katui, *Ehr. Hor. Phys.* f. 12 = xanthopus, *Fr.* 602.
 Klotschii, *Berk. Ann. Nat. Hist.* iii. 383 = Hexagona.
 labyrinthicus, *Mont. in Herb.* = *Irpex maximus*, *Fr.*
 labyrinthicus, *Weinm. Ross.* 313 = Weinmanni, *Fr.* 277.
 laccatus, *Pers. Myc. Eur.* ii. 64 = lucidus, *Fr.* 374.
 laceratus, *Curt. in Sillim. Journ.* = pergamenus, *Fr.* 727.
 lævis, *Pers. Myc. Eur.* ii. 68 = imberbis, *Fr.* 324.*
 lanatus, *Fr. Nova Symb.* 74 = *Trametes*.
 laricis, *Jacq. Misc.* t. 20 = officinalis, *Fr.* 307.
 Laurencii, *Berk. Fl. Tasm.* 254 = rubiginosus, *Berk.*
 leptopus, *Pers. Freyc. Voy.* 169, t. 2, f. 2 = umbraculum, *Fr.* 378.
 leucoporus, *Holms. Otis.* t. 30 = perennis, *Fr.* 581.
 lignescens, *Fr. Nova Symb.* 42 = lignosus, *Kl.* 329.
 lilacinus, *Schw. Syn. Car.* 942 = purpureus, *Fr.* 1072.
 lingua, *Nees. Acta. Cur.* xiii. t. 3 = amboinensis, *Fr.* 373.
 Lundii, *Mont. Cuba* 393 = rigidus, *B.* 860.
 macer, *Somm. Lapp.* 279 = vaporarius, *Fr.* 1033.

- Macowani, *Kalch. Grev.* x. 54 = dichrous, *Fr.* 959.
 macrotremus, *Jungh. (fide Leveille)* = Hexagona Molkenboeri,
Lev.
 macrotis, *Berk. in Herb.* = platotis, *B. & Br.* 133.
 malacoderma, *Fr. in Herb. Berk.* = occidentalis, *Kl.* 859.
 Marchionicus, *Lev. Ann. Sci. Nat.* 1846, 300 = Trametes.
 marginatus, *Pers. Syn.* 534 = pinicola, *Fr.* 412.
 medulla panis, *Secr. Myc. Suis.* iii. 108 = obducens, *Fr.* 973.
 mellinus, *Pers. Myc. Eur.* ii. 96 = sinuosus, *Fr.* 1086.
 meloleucus, *Berk. in Herb.* 2521 = albo-stygius, *B.*
 menandrianus, *Mont. Syll.* 165 = pergamenus, *Fr.* 727.
 merismoides, *Corda in Sturm.* = applanatus, *Fr.* 453.
 mesentericus, *Schæff. Icon.* t. 267 = giganteus, *Fr.* 153.
 Micheneri, *Berk. in Herb.* = benzoinus, *Fr.* 296.
 micromegas, *Mont. Syll.* 157 = zonalis, *B.* 326.
 minimus, *Jungh. Fl. Java* 64 = Laschia?
 minimus, *Rav. Grev.* i. 65 = elachista, *B.* 948.
 Miquelli, *Mont. Ann. Sci. Nat.* 1845, 357 = Hexagona.
 mollis, *A. & S. Consp.* 247 = Weinmanni, *Fr.* 277.
 mollis, *A. & S. var. β.* = fragilis, *Fr.* 198.
 mollis, *Rostk. Poly.* iv. t. 25 = erubescens, *Fr.* 298.
 mollis, *Somm. Lapp.* 271 = Trametes.
 monochrous, *Mont. Syll.* 163 = languidus, *Fr.* 383.
 mons-veneris, *Jungh. Fl. Java* 61 = leoninus, *Fr.* 694.
 Moritzianus, *Lev. Ann. Sci. Nat.* 1846, 130 = Trametes.
 morosus, *Kalch. Bot. Zeit.* = benzoinus, *Fr.* 296.
 mucidus, *Scop. Ann. Hist.* iv. 149 = alligatus, *Fr.* 176.
 Muelleri, *Kalch. Grev.* x. t. 145 = grammcephalus, *B.* 132.
 multicolor, *Schæff. Icon.* t. 269 = zonatus, *Fr.* 791.
 murinus, *Nees, sec. Fries.* = fascidulus, *Fr.* 60.
 murinus, *Lev. Ann. Sci. Nat.* 1844, 185 = brunneolus, *B.* 648.
 murinus, *Kalch. in Grev.* = glirinus, *K.* 793.
 murinus, *Rostk.* iv. t. 57 = subspadiceus, *Fr.* 1081.
 nidulans, *Secr. Myc. Suis.* iii. = lutescens, *Fr.* 855.
 nigricans, *Lasch. Rabh. Eas.* 15 = velutinus, *Fr.* 785.
 nigripes, *Wallr. Fl. Germ.* iv. 598 = picipes, *Fr.* 97.
 nigro-purpurascens, *Schw. Amer. Bor.* 360 = dichrous, *Fr.* 239.
 Niskiensiis, *Pers. Myc. Eur.* ii. 93 = incarnatus, *Fr.* 1065.
 nitens, *Batsch.* f. 225 = lucidus, *Fr.* 374.
 nitidus, *A. & S. Consp.* 258 = amorphus, *Fr.* 260.
 non-scriptus, *Berk. in Herb.* = Guilfoylei, *B.* 106.
 novæ-angliæ, *B. & C. Grev.* i. 51 = fulvus, *Fr.* 474.
 nummularius, *Schrad. Spic.* 152 = elegans, *Fr.* 101.
 oblectus (*Berk.*), *Fr. Novæ Syn.* = bulbipes, *Fr.* 584.
 obliquatus, *Bull. Champ.* t. 459 = lucidus, *Fr.* 374.
 obtusus, *Pers. Obs.* ii. 4 = igniarius, *Fr.* 469.
 ochraceus, *Pers. Syn.* 539 = zonatus, *Fr.* 791.
 odoratus, *Fr. Syst. Myc.* i. 373 = Trametes.
 pachypus, *Pers. Myc. Eur.* ii. 47 = politus, *Fr.* 21.
 pachyus, *Rostk. Poly.* xxvii. t. 5 = contiguus, *Fr.* ? 1113.

- paleaceus, *Fr. Epicr.* 471 = *Trametes*.
 pallescens, *Schrad. Spic.* 134 = *leucocephalus*, *Fr.* 61.
 pandani, *Fr. Epic.* 469 = *coccineus*, *Fr.* 554.
 Panurensis, *Berk. in Herb.* = *detritus*, *B.*
 pelleporus, *Bull. Champ.* t. 501, f. 2 = *adustus*, *Fr.* 253.
 pellopokus, *Secr. Myc. Suis.* ii. 126 = *dielrous*, *Fr.* 259.
 pellopokus, *Sow. Fungi* t. 230 = *pallescens*, *Fr.* 210.
 pellitus, *Meyer Fl. Esseq.* 304 = *Trametes fibrosa*, *Fr.*
 perdurans, *Kalch. Grev.* ix. 1 = *bulbipes*, *Fr.* 584.
 pertusus, *Pers. Myc. Eur.* ii. 103 = *corticola*, *Fr.* 1085.
 Philippinensis, *Berk. Hook. Journ.* 1842, 148 = *Favolus*.
 pithyus, *Chaill. sec. Streinz.* = *borealis*, *Fr.* 286.
 pisochapani, *Nees. Rumph. Amb.* vi., t. 576 = *amboinensis*, *Fr.* 373.
 platyporus, *Pers. Syn.* 521 = *squamosus*, *Fr.* 87.
 plicatus, *Pers. Myc. Eur.* ii. 212 = *salicinus*, *Fr.* 484.
 polyccephalus, *Pers. Syn.* 519 = *umbellatus*, *Fr.* 140.
 polygrammus, *Mont. Cuba* 379 = *Hexagona*.
 polymorphus, *Hoffm. Crypt. Subt.* 3, t. 1 = *Trametes odorata*, *Fr.*
 polyporus, *Bull. Champ.* t. 469 = *fuliginus*, *Fr.* 24.
 pomaceus, *Pers. Myc. Eur.* ii. 84 = *igniarius*, *Fr.* 469.
 populinus, *Schulz.* = *vulpinus*, *Fr.* 754.
 populneus, *Poll. Pl. Ver.* 34 = *castaneus*, *S.*
 proboscideus, *Jungh. (fide Lereille)* = *notopus*, *Lev.* 636.
 proteus, *Kalch. Grev.* x. 102 = *proteiformis*, *Cke.* 725.
 pseudo-boletus, *Jacq. Austr.* 26, t. 41 = *lucidus*, *Fr.* 374.
 pseudo-igniarius, *Bull. Champ.* t. 458 = *dryadeus*, *Fr.* 293.
 pseudo-pergamenus, *Thum. Myc. Univ.* = *pergamenus*, *Fr.* 727.
 pulvinatus, *Wahlbg. Suec.* ii. 957 = *spumeus*, *Fr.* 285.
 purgans, *Pers. Syn.* 531 = *officinalis*, *Fr.* 307.
 purpureus, *Rostk. Poly.* xxvii. t. 3 = *violaceus*, *Fr.* 1071.
 pusillus, *Schrad. Spic.* 152 = *brumalis*, *Fr.* 31.
 racodioides, *Pers. Myc. Eur.* ii. 113 = *bombycinus*, *Fr.*? 1045.
 ramosissimus, *Secr. Myc. Suis.* iii. 56 = *intybaceus*, *Fr.* 143.
 ramosissimus, *Scop. Carn.* ii. 470 = *umbellatus*, *Fr.* 140.
 ramosus, *Bull. Champ.* t. 418 = *imbricatus*, *Fr.* 175.
 Ravenalii, *B. & C. Grev.* i. 38 = *dealbatus*, *Rav.* 610.
 recurvus, *Berk. in Herb.* = *inflexibilis*, *B.* 515.
 resupinatus, *Bolt. Fung.* t. 165 = *resupinate Fomes?*
 reniformis, *Morgan Bot. Gaz.* 1882, 136 = *incrassatus*, *B.* 565.
 resupinatus, *Sow. Fungi* t. 424 = *Dædalea latissima*, *Fr.*
 rhabarbarinus, *Berk. Ann. Nat. Hist.* 1839, 388 = *senex*, *N.* 399.
 rhipidium, *Berk. Lond. Journ.* 1847, 319 = *Favolus*.
 rhombiporus, *Pers. Myc. Eur.* ii. 211 = *areularius*, *Fr.* 47.
 ribesius, *Pers. Myc. Eur.* ii. 80 = *ribis*, *Fr.* 482.
 rosamala, *Jungh. (fide Lereille)* = *rhodophæus*, *Lev.* 447.
 rosarum, *Weinm. Ross.* 319 = *candidus*, *Fr.* 159.
 roseoporus, *Rostk. Poly.* xxvii. t. 12 = *amorphus*, *Fr.* 260.
 rubella, *Pers. Obs.* i. 14 = *mollis*, *Fr.* 205.

- rubescens, *A. & S. Consp.* t. 11, f. 2 = *Trametes*.
 rubiginosus, *Schrad. Spic.* 168 = *resinosus*, *Fr.* 295.
 rubriporus, *Quel. Soc. Bot. Fr.* = *fusco-purpureus*, *Boud* 483.
 rudis, *Lev. Ann. Sci. Nat.* 1846, 133 = *subfulvus*, *Cke.* 887.
 rufescens, *Rostk. Poly.* iv. t. 7 = *tomentosus*, *Fr.* 574.
 rufolateritius, *Kalch. Grev.* x. 104 = *epilintea*, *B.* 986.
 rugosus, *Sow. Fung.* t. 422 = *alligatus*, *Fr.* 176.
 rugosus, *Trog. Schw.* 401 = *corrugis*, *Fr.* 767.
 rugulosus, *Lasch. Rabh. F. Eur.* 16 = *velutinus*, *Fr.* 785.
 russiceps, *B. & Br. Ceylon Fungi*, 449 = *grammocephalus*, *B.* 132.
 rutilans, *Rostk. Poly.* t. 36 = *testaceus*, *Fr.* 186.
 saccharinus, *B. & C. in Herb.* = *lacteus*, *Fr.* 178.
 sagræanus, *Mont. Cuba* t. xvi. f. 4 = *Trametes*.
 salebrosus, *Lasch. Rabh. Hb. Myc.* 1666 = *nodulosus*, *Fr.* 748.
 salicinus, *Bull. Champ.* t. 433, f. 1 = *albus*, *Fr.* 241.
 scalaris, *Pers. Myc. Eur.* ii. 90 = *serialis*, *Fr.* 716.
 scobinaceus, *Cum. Acta. Taur.* = *pescapæ*, *Fr.* 9.
 scobinaceus, *Berk. in Herb.* = variety of *Hodgkinsoniæ*, *K.* 672.
 scoticus, *Klot. Eng. Fl.* v. 142 = *annosus*, *Fr.* 533.
 scutiger, *Kalch. Enum.* = *Kalchbrenneri*, *Fr.* 579.
 scutiger, *Fr. Elen.* i. 73 = *Hexagona*.
 sebaceus, *Leys Syn. Fung.* 543 = *destructor*, *Fr.* 211.
 selectus, *Karst. Not. Fenn.* = *flavus*, *Karst.*
 semiovatus, *Schæff. Icon.* t. 270 = *pinicola*, *Fr.* 412.
 semipatera, *Pers.* = *lucidus*, *Fr.* 374.
 serialis, *Rostk. Poly.* t. 49 = *zonatus*, *Fr.* 791.
 sericeo-hirsutus, *Klot. Linn.* viii. 483 = *Hexagona*.
 serpentarius, *Pers. Myc. Eur.* ii. 82 = *annosus*, *Fr.* 533.
 sinensis, *Fr. Syst. Myc.* i. 345 = *Trametes*.
 sistotrema, *A. & S. Consp.* 243 = *Schweinitzii*, *Fr.* 76.
 sordidus, *Berk. Fr. Novæ Symb.* 64 = *sordidulus*, *B.* 744.
 spectabilis, *Fr. Novæ Symb.* 32 = var. *Schweinitzii*, *Fr.* 76.
 spumeus, *Fl. Dan.* t. 1794 = *epileucus*, *Fr.* 183.
 splendens, *Peck 26th Report* 68 = *oblectans*, *B.* 583.
 stalactites, *Hoffm. Veg. Crypt.* ii. t. 7 = *roseus*, *Fr.* 495.
 strigosus, *Schulz. Starg.* No. 1413 = *vulpinus*, *Fr.* 754.
 subeincereus, *Berk. Ann. Nat. Hist.* 1839, 391 = *adustus*, *Fr.* 253.
 suberosus, *Batsch. Elen.* f. 226 = *adustus*, *Fr.* 253.
 suberosus, *Bolt. Fun.* t. 162 = *Trametes odora*, *Fr.*
 suberosus, *Bull. Champ.* t. 482 = *nidulans*, *Fr.* 229.
 suberosus, *Linn. Succ.* No. 1253 = *betulinus*, *Fr.* 304.
 suberosus, *Sow. Fung.* t. 288 = *cytisinus*, *B.* 408.
 suberosus, *Wahlbg. Ups.* 457 = *spumeus*, *Fr.* 285.
 suberosus, *Krombh.* t. 48, f. 11-14 = *quercinus*, *Fr.* 303.
 submembranaceus, *Berk. in Herb.* 2796 = *Kurziaus*, *Cke.* 675.
 subpileatus, *Weinm. Ross.* 332 = *annosus*, *Fr.* 533.
 subpulverulentus, *B. & C. Linn. Journ.* x. 306 = *Favolus rhipidium*, *B.*
 subsquamosus, *Secr. Myc. Suis.* iii. 58 = *crestatus*, *Fr.* 144.
 substrictus, *Bolt. Fun.* t. 270 = *fuscidulus*, *Fr.* 60.

- substrigosus, *Berk. in Herb.* = occidentalis, *Fr.* 859.
 subtomentosus, *Bolt. Fun.* t. 87 = perennis, *Fr.* 581.
 surinamensis *Mont. Ann. Sci. Nat.* xx. 363 = tephropora, *M.* 1003.
 sutorius, *Scop. Ann. Bot.* iv. 149 = betulinus, *Fr.* 304.
 tabulæformis, *Berk. Hook. Journ.* 1845, 302 = Schweinitzii, *Fr.* 76.
 taurinus, *Pers. Myc. Eur.* ii. 37 = viscosus, *Fr.* 18.
 tegularis, *Lev. Ann. Sci. Nat.* 1846, 131 = *Trametes*.
 tenuis, *Berk. Ann. Nat. Hist.* iii. 382 = Hexagona.
 terrestris, *Sow. Fungi* t. 387, f. 5 = bombycinus, *Fr.* 1045.
 Teysmanni, *Berk. in Herb.* = affinis, *N.* 619.
 Todari, *Int. Sic.* t. 2 = sulfureus, *Fr.* 171.
 tornatus, *Pers. Freyc. Voy.* 173 = australis, *Fr.* 451.
 trachypus, *Rostk. Poly.* xxviii. t. 14 = brumalis, *Fr.* var. ? 31.
 tristis, *Lev. Ann. Sci. Nat.* 1846, 126 = *Trametes*.
 tuberculosus, *Jungh. (fide Leveille)* = trachoides, *Lev.* 434.
 umbellatus, *Viviani* t. 28 = Barrelieri, *Fr.* 139.
 umbilicatus, *Jungh. Fl. Java* = arcularius, *Fr.* 47.
 umbrinus, *Pers. Myc. Eur.* ii. 93 = obliquus, *Fr.* 568.
 unguulatus, *Bull. Champ.* t. 491 = fomentarius, *Fr.* 466.
 valenzuelianus, *Mont. Cub.* t. 15, f. 4 = supinus, *Fr.* 564.
 variegatus, *Schæff. Icon.* t. 263 = versicolor, *Fr.* 770.
 velutinus, *Sow. Fung.* t. 345 = hispidus, *Fr.* 265.
 velutinus, *Fl. Dan.* t. 1138 = resinosus, *Fr.* 295.
 versipellis, *B. & C. in Herb.* No. 2547 = versiculis, *B. & C.* 200.
 versiporus, *Pers. Myc. Eur.* ii. 105 = vaporarius, *Fr.* 1033.
 vesparius, *Berk. Ann. Nat. Hist.* iii. 323 = Hexagona Gunnii, *B.* Wightii, *Klot. Linn.* vii. 200 = Hexagona.
 xalapensis, *Curt. Sillim. Journ.* 1850 = elongatus, *Fr.* 672.
 xanthus, *Schwein. Amer. Bor.* 424 = pulchella, *Schw.* 1091.
 xerophyllaceus, *Currey Linn. Trans.* = Curreyi, *B.* 528.
 xylostromeus, *Pers. Myc. Eur.* ii. 112 = vitreus, *Fr.* 959.
 Zollingerianus, *Lev. Ann. Sci. Nat.* 1846, 131 = *Trametes*.

FUNGUS FORAYS, 1886.

HACKNEY NATURAL HISTORY SOCIETY.—Although the annual Fungus Foray of this Society is but a half-day excursion, it is customary for some of the most energetic members to proceed to Epping Forest by an early train and make up a whole day. On Saturday, September 18th, this course was pursued, and although the number of excursionists was more limited than usual, every effort was made to compensate for the remarkable dearth of fungi by close and persistent searching. Something like sixty species were all that could be found and recorded, and in some cases these were represented by only a single specimen. What additions were made to the records of the Forest Fungi were in nearly every case amongst the smaller fungi, other than Hymenomycetes. Agarics

were so scarce that not a single specimen of *Agaricus* (*Armillaria*) *melleus* could be found, although it is often so common as to be almost a nuisance; and the equally common *Agaricus* (*Clitocybe*) *laccatus* was represented by one solitary specimen. None of the excursionists present could remember any previous instance in which the Forest was so bare of fungi during the month of September.

HERTFORDSHIRE NATURAL HISTORY SOCIETY.—The day appointed for this Foray, November 6th, in Berry Grove Wood and Heart's Spring Wood, was one of continuous rain, as well as the day previous; hence the excursion was practically a failure.

CRYPTOGAMIC SOCIETY OF SCOTLAND.—The annual conference, held this year at Aberdeen, was presided over by Professor J. W. H. Trail, and commenced on Wednesday, 29th September, by an excursion to Monymusk, and continued in the evening by business meetings and a public meeting, at which the President delivered his annual address. On Thursday the excursion was made to Drum Woods, which concluded in the evening by the annual dinner at the Douglas Hotel. On Friday, 1st October, an excursion was arranged for Kingcansie Woods. A brief report of the meetings was communicated to the "Gardener's Chronicle," from which it would appear that although the intercourse between the mycologists north and south of the Tweed was an agreeable one, there were no startling scientific results and no long record of interesting additions to the "Fungus Flora."

CARLISLE.—While the Cryptogamic Society was holding its meetings at Aberdeen a private investigation of some of the country around Carlisle revealed the fact that *Lactarius helvus*, Fr., was growing in some abundance in a boggy wood some four miles distant from the city.

WOOLHOPE FIELD CLUB, HEREFORD.—The Foray this year was pervaded by a general feeling of depression, consequent on the remembrance of the severe loss which the Club had sustained since the meeting of last year in the death of Dr. Bull. A considerable number of mycologists met as usual, but the enthusiasm was damped by the unfavourable weather and the scarcity of fungi. The Tuesday excursion, October 5th, was to Whitfield, which the Club had not visited for some years. Nothing worthy of special note was found during the day, but sufficient to employ the evening in examination and discussion. Wednesday was devoted to the woods around Belmont—new ground to the Club—but not very successfully this year. Thursday, the Club Foray day, was given to the old grounds of Haywood Forest, but as the rain was almost incessant, with little result. The dinner in the evening was more limited in number of visitors than it has been for many years. An address by M. C. Cooke on the event of the day; the character and influence of the late Dr. Bull on mycology; a paper by the Rev. J. E. Vize on modes of mounting for the microscope; and one by the Rev. Augustin Ley, on Welsh Highland Floras in relation to the new Herefordshire Flora, brought the proceedings practically to a close. The illness of the President, Mr.

Piper, caused the projected excursion to Ledbury on the next day to be abandoned, and left it free for a closer examination of the spoils of the week and an earlier dispersion homewards.

ESSEX FIELD CLUB.—The annual excursion in Epping Forest on the 15th and 16th October was greatly marred this year by most unfortunate weather. The rain was almost incessant throughout the two days, and enthusiasm consequently was nearly damped out. By dint of considerable perseverance under umbrellas a very good collection of fungi was got together in the large room of the "Roebuck," and by four o'clock on the 16th completely arranged and labelled. A few rare species and some dozen or more not previously recorded for the Epping Forest district gave interest to the proceedings. There was a much larger gathering of members and visitors than could have been expected, very little below the total of previous occasions. After luncheon and the ordinary business of the Society, a report was submitted by M. C. Cooke of the work of the two days, with some remarks on the different species displayed on the tables and their special interest. Afterwards Professor Boulger narrated the progress of the new edition of the "Flora of Essex," at the same time indicating localities about which further records were desirable, urging the members to render him the assistance so much needed to make the "Flora" a success. Amongst the most noteworthy species of fungi added to the Forest Flora were *Agaricus (Inocybe) perlatus*, Cooke, which was found a few weeks previous to the Foray; *Agaricus (Tricholoma) stans*, Fr.; *Agaricus (Clitocybe) inversus*, Fr.; *Agaricus (Collybia) distortus*, Fr.; *Agaricus (Psilocybe) subericæus*, Fr.; *Agaricus (Psathyra) pennatus*, Fr.; *Russula grisea*, Fr.; *Lactarius subumbonatus*, Fr.; *Lactarius camphoratus*, var. *cimicarius*, Batsch; *Bolbitius Boltoni*, Fr.; and *Boletus olivaceus*, Schæff.

STEVENSON'S BRITISH FUNGI.*

The second volume of this work has now appeared, rather quicker than was expected, but, on the other hand, for the most part less carefully elaborated, as though it had been finished in a hurry. Some serious omissions of well-known species may be noted, and the arrangement subsequent to the end of the *Agaricini* is by no means satisfactory. The two volumes teem with contractions—very much contracted—of authorities cited, but the student must seek in vain for any key or index or any list of the full titles of the works so mercilessly abbreviated. The small woodcuts by Mr. Worthington Smith are excellent in their way, but we fear that the necessity for keeping them small has in many cases very much diminished their utility.

* "British Fungi (Hymenomycetes)," by Rev. John Stevenson. Vol. ii, Cortinariæ to Dacrymyces. London and Edinburgh: W. Blackwood and Sons. 1886.

C. E. BROOME.

British Mycology has suffered another severe loss by the death of Christopher Edmund Broome, M.A., of Batheaston, for many years associated with the Rev. M. J. Berkeley in the production of numerous contributions to the Linnean Society and the Annals of Natural History. Although ten years the junior of the latter, and apparently more active and vigorous, yet his friends have not failed to observe a gradual decline during the past twelve months, which has somewhat suddenly come to a fatal termination. His quiet unassuming manners, his extreme modesty in all scientific matters, and his universal kindness and geniality, endeared him to all who knew him.

KALCHBRENNER.—The Rev. Charles Kalchbrenner, the amiable and accomplished Hungarian Mycologist, died recently at the age of 79 years.

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Grevillea,

A QUARTERLY RECORD OF CRYPTOGAMIC BOTANY
AND ITS LITERATURE.

NEW BRITISH FUNGI.

By M. C. COOKE.

(Continued from p. 43.)

Agaricus (Amanita) solitarius, Bull. Champ., t. 48.

Pileus convex then flattened, pelliculose, margin nearly even, warts angular, evanescent. Stem solid, equal, *imbricately squamose below*, bulb campanulate, *rooting*, margin inserted, ring torn, gills attenuatedly adnate.—Fr. Hym. Eur. p. 22.

On the ground. Near Bristol. (C. Bucknall.)

Agaricus (Chitonia) rubriceps, Cooke & Mass.

Pileus rather fleshy, campanulate then expanded, umbonate, smooth, even, testaceous, margin faintly striate, stem erect, fistulose, paler than the pileus, rooting, volva sheathing, saccate, whitish, torn at the margin. Gills free, lanceolate, rather crowded, purplish brown. Spores elliptical, a little attenuated at each end, $12 \times 6 \mu$.

On soil in Aroid house. Kew Gardens. Dec., 1886.

Not an indigenous species, but of interest as illustrating the sub-genus.

Pileus 1 inch diam. Stem 3 in. long, about two lines thick.

Agaricus (Panæolus) scitulus, Massee.

Pileus campanulate, obtuse, smooth, even, viscid, margin exceeding the gills, dirty ochre, pale; flesh thin, white, stem equal, fistulose, white, shining, base peronate, sheath ending in a persistent ring below the middle of the stem; gills crowded, narrow, becoming ashy grey, speckled with the black spores, margin entire, paler, spores black, with a colourless hilum, narrowly elliptical, $12-13, \times 4 \mu$.

On soil in flower-pot. Scarborough. June, 1885.

Pileus $\frac{1}{2}$ in. broad, rather higher than broad. Stem $1\frac{1}{2}$ in. long, about one line thick. It resembles *Ag. separatus* in miniature, but differs in the sheathed stem and basal ring.

Cortinarius (Phlegmacium) atro-virens, *Kalch. Hung. t. 19, f. 3.*

Pileus compact, convex, even, viscid, dark green, or olivaceous umber, flesh greenish yellow, stem solid, stout, fibrillose, except the subturbinate-marginate bulb. Gills adnate, crowded, sulphury then greenish, at length cinnamon.—*Fr. Hym. Eur. p. 349.*

In pine woods. Scarborough. (G. Massee.)

Mycelium tawny.

Cortinarius (Inoloma) malachius, *Fr. Hym. Eur. 361.*

Pileus rather compact, obtuse, pallid lilac, soon discoloured, becoming smooth, at first clad with white fibrils, stem bulbous, with a bluish veil, internally and the veil becoming whitish, gills emarginate, crowded, pallid purplish, then watery ferruginous.

In fir woods. Pontrilas. Sept., 1885.

Flesh of the stem soft, often contorted and ventricose, 3-4 inches long and an inch thick. Pileus 2 in. broad, lilac, then tawny ferruginous or when dry of a brick red, becoming pale, hoary with a whitish pubescence, or silky at the margin.

Cortinarius (Dermocybe) subnotatus, *Pers. Syn. 296.*

Pileus fleshy, thin, campanulate, then flattened, squamulose with hoary superficial flocci, soon smooth, olive, then fuscous; stem spongy, stuffed, conical, elongated, marked with scales or fibrils and the yellowish veil, smooth and shining at the apex; gills adnate, ventricose, broad, rather distant, yellowish, then olivaceous-cinnamon.—*Fr. Hym. Eur. 373.*

Under beech, &c. Alresford, Hants. (Rev. W. Eyre.)

Stem 3-4 in., fragile. Pileus 4 in., gills 3-5 lines broad, connected by veins, rather thick.

Cortinarius (Dermocybe) valgus, *Fr. Hym. Eur. 373.*

Fragile. Pileus convex, somewhat gibbous, even, becoming smooth, olivaceous, then brick red, margin rather membranaceous, stem somewhat hollow, elongated, twisted, naked, pallid, shining, apex striate, sub-violaceous, bulb rooting, whitish, tomentose, gills affixed, rather distant, dingy yellow, then brick red.

Amongst moss in woods. Near Bristol. (C. Bucknall.)

The form referred to this species, with some doubt, differs from the type in several particulars, and is perhaps a distinct variety. See "Illustrations," t. 750.

Cortinarius (Hydrocybe) Krombholzii, *Fr. Hym. Eur. p. 395.*

Pileus conic-campanulate, then gibbous, even, smooth, disc fleshy, margin thin, veil appendiculate; stem fistulose, equal, naked, whitish; gills nearly free, broad, ferruginous, the edge becoming yellowish.—*Krombh. t. 2, f. 31.*

Amongst moss. Scarboro'. (G. Massee.)

Stem 3 in. long, 3 lines thick. Pileus about an inch. Habit that of *Hypoholoma*. Often caespitose.

Hygrophorus livido-albus, *Fr. Hym. Eur. p. 412.*

Pileus fleshy, thin, obtuse, *even, smooth*, viscid, *livid*, of one colour, margin naked; stem stuffed, slender, equal, nearly even; gills decurrent, distant, distinct, white.—*Fl. Dan. t. 1907, f. 2.*

In woods. Queen's Cottage grounds, Kew. Nov., 1886.

Hydnum (Resup.) fusco-atrum, *Fr. Hym. Eur. p. 612.*

Subiculum crustaceous, thin, at first glaucous, flocculoso-pruinose, then smooth, ferruginous brown, spines short, conically subulate, acute, fawn-colour, then blackish.

On rotten wood. (C. Bucknall.)

Diatrype Sowerbeii, *Berk. in Herb. No. 8786.*

Erumpent, verruciform, disc pallid, perithecia small, few, with short necks. Asci clavate, almost sessile, sporidia eight, narrowly elliptical, hyaline, $20 \times 4.5 \mu$.—*Sowerby Fungi t. 378, f. 14.*

On branches.

This is the original specimen from Sowerby's Herbarium of the species figured as above, which has also *Trichoderma viride* growing as a parasite upon it.

Agaricus (Clitocybe) zygophyllus, *Cooke & Mass.*

Pileus rather fleshy, convex, then expanded, disc depressed, hygrophonous, tough, flaccid, pallid, with a greyish tint when moist, ochraceous white when dry, margin thin, at first involute, rugose or *plicate*, as if pinched up at regular intervals, stem equal, stuffed, spongy, white, expanding into the pileus, even, smooth, with a thin white tomentum at the base; *gills deeply decurrent*, rather distant, distinctly *connected by veins*, cinereous. Spores elliptical ($8 \times 4 \mu$).

Amongst leaves. Swarraton, Hants. Nov. (Rev. W. L. W. Eyre.)

Pileus 2-4 in diam. Stem 2 in. long, $\frac{1}{4}$ - $\frac{1}{3}$ inch thick. Will be figured in supplement to "Illustrations."

SYNOPSIS MYCOLOGIÆ VENETÆ.*

This is an octavo volume of 360 pages, clearly and distinctly printed, of Italian Fungi classed according to their hosts, or matrices, after the manner of the little volume published by Westendorp many years ago. A work of this kind is often very useful, only that species seem to increase at such an enormous rate that new editions will be required every year or two. Doubtless its value would have been enhanced had it not been confined to Italian Fungi, but included all known species, as far as practicable, from all parts of the world, or, at any rate, for the whole of Europe.

* "Synopsis Mycologiæ Venetæ," secundum matrices, digesserunt. J. Cuboni et V. Mancini. Svo, Patavii, 1886.

BRITISH PYRENOAMYCETES.

A preliminary list of known species.

By G. MASSEE.

(Continued from p. 39.)

Fam. 5. DIATRYPEÆ. Composite. Perithecia immersed in a heterogenous stroma.

GEN. 1. **DIATRYPE**, *Fries.* Stroma erumpent or superficial, effused, discoid or somewhat verruciform.

* DIATRYPELLA, *Not.* Asci polysporous, sporidia allantoid, hyaline.

1. *D. verruciformis*, *Ehr., Sacc. Syll.* 743; *Hdbk.* 2432.
On branches. Common.
var. *affinis*, *Cke.*
On elder. Whitehall. On alder. Shere.
2. *D. favacea*, *Fr., Sacc. Syll.* 744; *Hdbk.* 2431.
On *Betula alba*. Chislehurst, Lynn.
3. *D. nigro-annulata*, *Grev., Sacc. Syll.* 745; *Hdbk.* 2433
(= *angulata*, *Fr.*).
On lime and beech. Scotland.
On oak and holly. Chislehurst, Weybridge, Eltham, and Pentrich.
4. *D. Tocciaæana*, *Not., Sacc. Syll.* 747.
On alder. Dinmore, Irstead, Lyme Regis.
5. *D. aspera*, *Fr., Sacc. Syll.* 753; *Hdbk.* 2430.
On elm, beech, &c. Weybridge, Eltham, Burnt Ash Lane, Bishop's Wood, Lynn.
6. *D. quercina*, *P., Sacc. Syll.* 759; *Hdbk.* 2429.
On oak. Common.

** DIATRYPE, *Fries.* Asci octosporous, sporidia sausage-shaped, hyaline.

a. STICTOSPHERIA. Stroma effused.

7. *D. stigma*, *Hoffm., Sacc. Syll.* 705; *Hdbk.* 2434.
On bark and wood. Paul's Cray Common, Blackheath, Weybridge, Forden, etc.

b. DISCOSPHÆRIA. Stroma discoid or verruciform.

8. *D. bullata*, *Hoffm., Sacc. Syll.* 704; *Hdbk.* 2436.
On willow. Norths, Forden, Hereford, Brighton.
9. *D. disciformis*, *Hoffm., Sacc. Syll.* 703; *Hdbk.* 2435.
On alder. Mark Ash, Hants.
On beech. Forden, Shere, Edinboro', etc.

10. *D. hystrix*, *Fr.*, *Sacc. Syll.* 711 ; *Hdbk.* 2437.
On sycamore branches. Chislehurst.
 11. *D. corniculata*, *Ehr.*, *Sacc. Syll.* 714 ; *Hdbk.* 2438.
On maple and ash branches. Weybridge, Kidbrooke.
 12. *D. brassicæ*, *Cke.*, *Grev.* xiii, 100.
On cabbage stems. Kew Gardens.
 13. *D. berberidis*, *Cke.*, *Grev.* xiv, 14.
On *Berberis vulgaris*. Bristol.
- *** *Sporidia sub-elliptical, hyaline.*
14. *D. Sowerbeii*, *B. in Herb.* No. 8786 A.
On branches. Sowerby's herbarium.
- ** SCLEROSTOMA. *Sporidia uniseptate, hyaline.*
† *Sporidia not appendiculate.*
15. *D. strumella*, *Fr.*, *Sacc. Syll.* 2376 ; *Hdbk.* 2444.
On red currant. Darent, Dartford, Lynn.
 16. *D. varians*, *Curr.*, *Sacc. Syll.* 2379 ; *Hdbk.* 2439.
On maple branches. Eltham.
 17. *D. nucleata*, *Curr.*, *Sacc. Syll.* 2393 , *Hdbk.* 2445.
On furze. Weybridge, Shere, Lynn.
 18. *D. sordida*, *Curr.*, *Linn. Trans.* xxv, 246.
On oak. Weybridge.
- †† *Sporidia appendiculate.*
19. *D. pyrrhocystis*, *B. & Br.*, *Sacc. Syll.* 2420 ; *Hdbk.* 2441.
On hazel. Batheaston, Highgate.
- *** CALOSPORA. *Sporidia triseptate.*
20. *D. ulicis*, *Fr.*, *Sacc. Syll.* 3702 ; *Hdbk.* 2453.
On elm. Penzance.
 21. *D. undulata*, *B. & Br.*, *Sacc. Syll.* 3705 ; *Hdbk.* 2443.
On branches. Twycross, Glamis. On ivy, King's Cliffe.
- **** HILLIA. *Sporidia multiseptate.*
22. *D. ferruginea* (*Pers.*), *K.*, *Sacc. Syll.* 4115 ; *Hdbk.* 2447.
On hazel. Benthall Hill, Apethorpe, Weybridge.
- ***** FUEKELIA. *Sporidia continuous, brown.*
23. *D. turgida*, *Fries*, *Sacc. Syll.* 1128.
On beech, &c. Eltham, Lullingstone Park, Twycross.
 24. *D. dryophila*, *Curr.*, *Sacc. Syll.* 1149 ; *Hdbk.* 2449.
On oak branches. Weybridge, Twycross.
 25. *D. denigrans*, *Curr.*, *Sacc. Syll.* 1148 ; *Hdbk.* 2450.
On dead branches.
- ***** VALSARIA. *Sporidia uniseptate, brown.*
26. *D. cincta*, *Curr.*, *Sacc. Syll.* 2809 ; *Hdbk.* 2451.
On beech. Shere.

Fam. 6. **VALSEÆ**. Composite, stroma formed from the matrix. Perithecia distinct, circinating or seriate.

GEN. 1. **VALSA**, *Fries*. Perithecia collected in tufts, immersed in the bark, disposed in rings, ostiola convergent, erumpent, forming a disc.

A. Sporidia sausage-shaped, hyaline.

SUB-GEN. 1. **Coronophora**, *Fekl*.

1. *V. gregaria*, *Lib.*, *Sacc. Syll.* 413.
On twigs. Bentry, near Bristol.

SUB-GEN. 2. **Eutypella**, *Sacc*. Ostiola sulcate. Asci octosporous.

2. *V. prunastri*, *Fr.*, *Sacc. Syll.* 566.
On species of *Prunus*.
3. *V. sorbi*, *Schm.*, *Sacc. Syll.* 568.
On *Sorbus aucuparia*. Twycross.
4. *V. stellulata*, *Fr.*, *Sacc. Syll.* 571 ; *Hdbk.* 2461.
On maple. King's Cliffe, Pentrich, Eltham Grove.
On elm. Forden.
5. *V. ailanthi*, *Sacc.*, *Sacc. Syll.* 577.
On *Ailanthus glandulosa*. Kew Gardens.
6. *V. microspora*, *C. & Plow.*, *Sacc. Syll.* 589.
On beech. Terrington, Norfolk.
7. *V. tetraploa*, *B. & C.*, *Sacc. Syll.* 595 ; *Hdbk.* 2478.
On dead sticks. Elmhurst.

SUB-GEN. 3. **Leucostoma**, *Ntke*. Disc white, cinereous, or yellowish. Ostiola not sulcate. Asci octosporous.

8. *V. nivea* (*Hoffm.*), *Sacc. Syll.* 533 ; *Hdbk.* 2463.
On poplar. Edinboro', Sydenham, Twycross, Terrington.
9. *V. leucostoma*, *Pers.*, *Sacc. Syll.* 537 ; *Hdbk.* 2464.
Appin. On *Cotoneaster bacillaris*. Kew.
10. *V. Kunzei*, *Fries*, *Sacc. Syll.* 538 ; *Hdbk.* 2465.
On fir bark. King's Lynn.
11. *V. lauro-cerasi*, *Tul.*, *Sacc. Syll.* 546.
On cherry laurel. Shrewsbury, Forden.
12. *V. ceuthospora*, *Cooke*, *Sacc. Syll.* 547.
On *Prunus lauro-cerasus*. Forden.
13. *V. abrupta*, *Cke.*, *Sacc. Syll.* 548.
On willow. Shere.
14. *V. tessella*, *Fr.*, *Sacc. Syll.* 559.
On willow. Shere.

SUB-GEN. 4. **Euvalsa**, *Ntke*. Disc black, ostiola not sulcate. Asci octosporous.

* **MICROSPORÆ**. *Sporidia minute, scarcely 8 μ long.*

15. *V. ceratophora*, *Tul.*, *Sacc. Syll.* 429 ; *Hdbk.* 2472.
On oak. Weybridge, Elmstead.
On elm. Whitehall.

- var. *rosarum*, *De Not.*
 On rose stems. Kew Gardens.
 var. *quercicola*, *Sacc.*
 On oak. Shere.
 var. *acericola*, *Cooke.*
 On *Acer*. Shere.
 var. *ulmi*, *Cooke.*
 On elm. Whitehall.
16. *V. coronata*, *Hoffm.*, *Sacc. Syll.* 433 ; *Hdbk.* 2471.
 On birch. Mossburnford, Shere.
17. *V. abietis*, *Fr.*, *Sacc. Syll.* 437 ; *Hdbk.* 2473.
 On fir branches. Glamis, Terrington.
18. *V. quercea*, *Curr.*, *Sacc. Syll.* 472 ; *Hdbk.* 2480.
 On oak bark. Weybridge, Darent.
19. *V. syngenesia*, *Fr.*, *Sacc. Syll.* 411 ; *Hdbk.* 2462.
 On buckthorn. Highgate.
 On elder. Whitehall, Batheaston.

** MESOSPORÆ. *Sporidia of medium size, 8 to 12 μ long.*

20. *V. microstoma*, *Pers.*, *Sacc. Syll.* 438 ; *Hdbk.* 2466.
 On alder. King's Cliffe.
21. *V. Fuckelii*, *Ntke.*, *Sacc. Syll.* 440.
 On *Corylus*. Shere.
22. *V. leiphemoides*, *B. & C.*, *Sacc. Syll.* 444.
 On oak bark. Rudloe (*Herb. Berk.*).
23. *V. Schweinitzii*, *Ntke.*, *Sacc. Syll.* 447.
 On willow. Shere.
24. *V. syringæ*, *Ntke.*, *Sacc. Syll.* 448.
 On branches of *Syringa*. Botanical Gardens, Edinboro'.
25. *V. Hoffmanni*, *Ntke.*, *Sacc. Syll.* 456.
 On *Cratægus*. Highgate.
26. *V. cornicola*, *Cke.*, *Sacc. Syll.* 473.
 On *Cornus sanguinea*. Darent.

** MACROSPORÆ. *Sporidia large, more than 12 μ long.*

27. *V. ambiens*, *Fr.*, *Sacc. Syll.* 512 ; *Hdbk.* 2475.
 On *Rosa canina*, *Acer dasycarpum*, *Betula alba*, &c. Common.
 var. *coryli*, *Sacc.*
 On hazel. Ringstead, Thirsk.
 var. *carpini*, *Cooke.*
 On hornbeam. Highgate.
 var. *mali*, *Sacc.*
 On *Pyrus malus*. Terrington.
 var. *pyri*, *Cooke.*
 On *Pyrus torminalis*. Highgate.
 var. *cratægi*, *Cooke.*
 On hawthorn. *Fungi Britt.* No. 232.

28. *V. populina*, *Fekl., Sacc. Syll.* 513.
On poplar. Terrington, Thirsk.
29. *V. salicina*, *Pers., Sacc. Syll.* 514; *Hdbk.* 2476.
On willow. Weybridge, Irstead, Kidbrooke, &c.
30. *V. Curreyi*, *Nike., Sacc. Syll.* 516.
On dead larch branches. Weybridge, Perth.
31. *V. cypri*, *Tul., Sacc. Syll.* 517.
On privet. Twyteross.
32. *V. pauperata*, *C. & E., Sacc. Syll.* 525.
On *Cerasus avium*. Jedburgh.
33. *V. rhodophila*, *B. & Br., Sacc. Syll.* 529; *Hdbk.* 2479.
On rose stems. Orton Wood.
34. *V. subseriata*, *Cooke, Grev.* xiv, 47.
On birch. Shere.

A NEW GOSPEL OF MYCOPHAGY.

It is so seldom that scientific books are lively and spirited, dispersing scintillations of wit in all directions, like sparks from a smith's anvil, that when one is met with it is by no means surprising that we hasten to make a note of it. Under the title of "An Elementary Text Book of British Fungi," the traveller in search of the curious will find much to interest him. There are fifteen pages of figures to illustrate the text, and forty-four pages of figures which have nothing whatever to do with the text; perhaps this is not unusual, but it is curious. By a strange fatality they would be insufficient to illustrate anything satisfactorily, even with the full explanation that is missing. It is not so easy to see the joke of coining a batch of names, supposed to become the popular names of the future for certain edible and poisonous fungi. *Agaricus inversus* is the "infamous Clitocybe"—poor Agaric to be so much maligned—but *Agaricus phalloides* is the "arch bane," perhaps out of compliment to the "Archangel," for the next species is the "Destroying Angel." Theologians will be glad to learn that the name of the "Destroying Angel" has been found at last, and that it is *Agaricus vernus*, because it is "angelically beautiful, and demoniacally poisonous." With less reason *Agaricus crustuliniformis* is baptized anew as "The snake in the grass," but why not "The toad in a hole?" There are more reptiles yet, for *Agaricus lacrymabundus* is called the "Crocodile," because it sheds crocodile's tears. Oh! And "is bowed down with the weight of its guilt." This is a sly insinuation against its slipping wholesale into the manufacture of "trade ketchup." Then, again, there is the "Yellow Reptile," which is a translation from *Agaricus sulfureus*, but why not "Mephistopheles," from the suggestion of sulphur, save out of respect to Mr. Irving, or to the superior qualifications of *Boletus satanas*, which is "Beelzebub's cushion."

Hardly less happy, unless there is some hidden satire beneath the names, are many of the esculent species. For instance *Ag. dealbatus* is the "cream clot" (not to be confounded with Devonshire clotted cream), *Ag. nebularis* is the "cheese-cap," but the "red milk" and the "sweet milk" follow at a respectful distance. The general notion of "spindle shanks" certainly does not correspond with *Agaricus fusipes*; and of *Agaricus clavus*, called the "red nail," it can scarcely be said that the "right nail was hit in the head" when this diminutive little species was included with edible fungi as "a flavouring for sauces." It would probably occupy a mycologist seven years to collect a sufficient number of specimens in the British Isles to flavour a basin of soup. *Agaricus pudicus* is called the "Ingénue," but this is hardly a popular name; perhaps "the naughty Agaric" would have been better. It may be naughty, but it's very nice. *Agaricus albellus* is the "Muscat," and *Agaricus graveolens* the "False muscat," but *what* "graveolens?" We should much like to be informed *who* has ever found *Ag. graveolens* (Fr.) in the British Isles, or *Ag. cæsareus*, or *Polyporus corylinus*, or *Polyporus tuberaster*, all of them included as British species.

There are in this curious book a great number of recipes for cooking fungi, doubtless sufficient to meet any emergency. We should require special instructions in cooking before we could venture on the following very interesting species, which figure in the catalogue of British Edible Fungi. These are *Polyporus fomentarius* (requiring good teeth), *Polyporus squamosus* (requiring good digestion), *Agaricus (Entoloma) sinuatus* (would Worthington Smith endorse this recommendation?), *Agaricus (Entoloma) rhodopolius* (would require a strong stomach), *Lactarius piperatus* (not desirable too late at night), *Lactarius torminosus* (should be tried very early in the morning), *Lactarius turpis* (similar in odour, texture, and appearance to cow-dung, not very recent), and some others equally eligible and interesting—to an undertaker.

Turning over the "culinary receipts" the reader will be shocked to find that the author, after all, has *not* the courage of his opinions, for, although in another part he repudiates the name of "mushroom" as too much "vulgar," he uses it for the first two of his receipts, and after that it is changed to "Pratelle;" for, be it known to all men, that *Pratelle* is the name predestined for all genuine mushrooms in the future. Pass on till No. 86 is reached, and then learn how "to prepare urchins," which is done by cutting the large ones into several pieces, but whether the cutting is to be done with a birch rod or a rattan cane does not transpire. "In ten minutes take out the urchins and drain them thoroughly. Now dress them as in No. 48." Poor urchins, "take them up tenderly, dress them with care." The same merciless Soyer afterwards makes game (p. 226) of "Grisettes on Toast."

Finally there is a good joke anent *Polyporus squamosus*, which Mrs. Hussey supposed would have a resemblance to stewed saddle

flaps when cooked, but when dried and sliced, and duly prepared, became transformed into respectable razor-strops. We will conclude with an extract from the book which forms the basis of the above remarks, anent this species. "I find that St. Maurice was in the habit of shaving, that he kept his razors in order upon a strop of the period, and that the said strop was made from a slice cut from the heart of a great fungus parasitic on trees. Now the Razor Strop Fungus in particular is *Polyporus squamosus*, which, until better information reaches me, I shall hold to be St. Maurice's Mushroom." Oh, ye of little faith, wherefore will ye doubt.

SACCARDO, SYLLOGE FUNGORUM.

The following Appendix of 484 pages has just reached us. "Additamenta ad Vol. i-iv, curantibus Doct. A. N. Berlese et P. Voglino, Patavii, 1886." Uniform in size and style with the four vols. of the "Sylloge." Of course it is indispensable to all who possess the original work, for which it contains numerous corrections as well as additions.

INDEX LICHENUM BRITANNICORUM.

(According to the most recent Nylanderian Arrangement.)

BY THE REV. J. M. CROMBIE, F.L.S.

PART I. (Concluded).

Series IV. **Phyllodei**, Nyl.

Tribe XIII. **PARMELIEI**, Nyl.

Genus I. **EVERNIA** (Ach.), Nyl.

Sp. 1 *E. prunastri* (L.), Ach.

f. 1, *retusa*, Ach.

β. *stictocera* (Sm.), Cromb.

2 *E. furfuracea* (L.), Fr.

f. 1. *scobicina* (Ach.), Nyl.

2, *ceratea* (Ach.), Nyl.

Genus II. **PARMELIA** (Ach.), Nyl.

* *Hyporhizia*, Cromb.

A. Glaucescentes.

Sp. 1 *P. perlata* (L.), Ach.

* *P. ciliata* (Schær.), Nyl.

2 *P. certrarioides* (Del.), Nyl.

3 *P. olivetorum* (Ach.), Nyl.

4 *P. perforata* (Wulf.) Ach.

5 *P. lævigata* (Sm.), Ach.

6 *P. xanthomyela*, Nyl.

- 7 *P. dissecta*, *Nyl.*
- 8 *P. revoluta* (*Flk.*), *Nyl.*
 - f. 1, *rugosa* (*Tayl.*), *Cromb.*
 - 2, *panniformis*, *Cromb.*
 - 3, *concentrica* (*Leight.*), *Cromb.*
- 9 *P. tiliacea* (*Hffm.*), *Ach.*
- * *P. carporhizans* (*Tayl.*), *Nyl.*
- 10 *P. scortea*, *Ach.*
- 11 *P. saxatilis* (*L.*), *Ach.*
 - f. 1, *furfuracea*, *Schær.*
 - 2, *panniformis*, *Ach.*
- 12 *P. sulcata*, *Tayl.*
 - β . *lævis*, *Nyl.*
- 13 *P. omphalodes* (*L.*), *Nyl.*
 - f. 1, *cæsiopruinosa*, *Nyl.*
 - β . *panniformis* (*Ach.*), *Nyl.*
 - f. 1, *glomulifera* *Cromb.*
 - 2, *subconcentrica*, *Cromb.*
- 14 *P. Borreri*, *Turn.*
- B. *Ochroleucæ.*
- 15 *P. caperata* (*L.*), *Ach.*
- 16 *P. sinuosa* (*Sm.*), *Ach.*
- 17 *P. conspersa* (*Ehrb.*), *Ach.*
 - f. 1, *isidiata* (*Anzi*), *Leight.*
 - 2, *stenophylla*, *Ach.*
- 18 *P. Mougeotii*, *Schær.*
 - f. 1, *dispersa*, *Cromb.*
- 19 *P. incurva* (*Pers.*), *Fr.*
- C. *Olivaceæ.*
- 20 *P. Acetabulum* (*Neck.*), *Dub.*
- 21 *P. olivacea* (*L.*), *Ach.*
- 22 *P. exasperata* (*Ach.*), *Nyl.*
- 23 *P. subaurifera*, *Nyl.*
- 24 *P. proluxa* (*Ach.*), *Nyl.*
 - β . *sorediata* (*Ach.*), *Nyl.*
- * *P. Delisei* (*Dub.*), *Nyl.*
 - β . *isidiascens*, *Nyl.*
- 25 *P. fuliginosa* (*Fr.*), *Nyl.*
 - β . *lætevirens* (*Fr.*), *Nyl.*
- * *P. glabratula*, *Lamy.*
- 26 *P. stygia* (*L.*), *Ach.*
- 27 *P. lanata* (*L.*), *Nyl.*
 - β . *reticulata* (*Wulf.*), *Cromb.*
- 28 *P. tristis* (*Wcb.*), *Nyl.*
- * *Hypogymnia*, *Nyl.*
- 29 *P. physodes* (*L.*), *Ach.*
 - f. 1, *labrosa*, *Ach.*
 - 2, *tubulosa*, *Schær.*
 - β . *platyphylla*, *Ach.*

- 30 *P. vittata* (Ach.), Nyl.
- 31 *P. encausta* (Sm.), Ach.
- 32 *P. alpicola* Fr. fil.
- 33 *P. pertusa* (Schränk.), Schær.

Genus III. *PARMELIOPSIS*, Nyl.

- Sp. 1 *P. ambigua* (Wulf.), Nyl.
- 2 *P. aleurites* (Ach.), Nyl.

Tribe XIV. **STICTEI**, Nyl.

Genus I. *STICTINA*, Nyl.

- * *Eustictina*, Cromb.
 - a *Pseudocyphellatae*.
- Sp. 1 *St. Thouarsii* (Del.), Nyl.
- 2 *St. crocata*, (L.), Nyl.
 - b *Cyphellatae*.
- 3 *St. fuliginosa* (Dcks.), Nyl.
- 4 *St. limbata* (Sm.), Nyl.
- 5 *St. sylvatica* (Huds.), Nyl.
- 6 *St. Dufourei* (Del.), Nyl.

Genus II. *LOBARINA*, Nyl.

- Sp. 1 *L. scrobiculata* (Scop.), Nyl.

Genus III. *LOBARIA* (Hffm.), Nyl.

- Sp. 1 *L. pulmonaria* (L.), Hffm.
 - f. 1, *hypomela* (Del.)
 - f. 2, *pleurocarpa* (Ach.)
 - f. 3, *aggregata*, (Del.)

Genus IV. *STICTA* (Ach.), Nyl.

- * *Eusticta*, Cromb.
 - a *Cyphellatae*.
- Sp. 1 *St. damæcornis*, Sw.
 - f. *latior*, Cromb.
- * *Parmosticta*, Nyl.
- 2 *St. aurata*, Ach.
 - f. 1 *subglaucescens*, Cromb.

Genus V. *RICASOLIA* (D.N.), Nyl.

- Sp. 1 *R. amplissima* (Scop.), Leight.
- 2 *R. lætevirens* (Lghtfl.), Leight.

Tribe XV. **PELTIGEREI**, *Nyl.*Sub-Tribe I. **Nephromei**, *Nyl.**Genus* I. **NEPHROMIUM**, *Nyl.*

- Sp. 1 *N. tomentosum* (*Hffm.*), *Nyl.*
 f. 1 *rameum* (*Schær.*), *Nyl.*
 2 *N. lævigatum* (*Ach.*), *Nyl.*
 3 *N. parile* (*Ach.*), *Nyl.*
 4 *N. subtomentellum*, *Nyl.*
 5 *N. lusitanicum* (*Schær.*), *Nyl.*
 f. 1, *panniforme*, *Cromb.*
 β. *Hibernicum*, *Nyl.*

Sub-Tribe II. **Peltidiei**, *Nyl.**Genus* II. **PELTIDEA** (*Ach.*), *Nyl.*

- Sp. 1 *P. aphthosa* (*L.*), *Ach.*
 f. 1, *leucophlebia*, *Nyl.*
 2 *P. venosa* (*L.*), *Ach.*

Genus III. **PELTIGERA** (*Hffm.*), *Nyl.*

- Sp. 1 *P. malacea* (*Hffm.*), *Nyl.*
 2 *P. canina* (*L.*), *Hffm.*
 f. 1, *lepidophora*, *Nyl.*
 β. *membranacea* (*Ach.*).
 3 *P. rufescens*, *Hffm.*
 f. 1, *prætextata*, *Flk.*
 4 *P. spuria*, *Ach.*
 5 *P. scabrosa*, *Fr. fil.*
 6 *P. polydactyla* (*Neck.*), *Hffm.*
 f. 1, *collina* (*Ach.*), *Nyl.*
 2, *microcarpa* (*Ach.*), *Nyl.*
 β. *hymenina* (*Ach.*), *Nyl.*
 7 *P. scutata* (*Dcks.*)
 8 *P. horizontalis* (*L.*), *Hffm.*
 f. 1, *muscorum*, *Schær.*

Sub-Tribe III. **Solorinei**, *Nyl.**Genus* IV. **SOLORINA** (*Ach.*), *Nyl.*

- Sp. 1 *S. crocea* (*L.*), *Ach.*
 2 *S. saccata* (*L.*), *Ach.*
 f. 1, *pruinosa*, *Fr.*
 3 *S. spongiosa* (*Sm.*), *Nyl.*
 4 *S. bispora*, *Nyl.*

Tribe XVI. **PHYSCIEI**, *Nyl.**Genus* I. **PHYSCIA** (*Fr.*), *Nyl.*A. *Flavescentes* (*Xanthoria*, *Fr. fil.*).

- Sp. 1 *Ph. flavicans* (*Sw.*), *D.C.*

- 2 *Ph. chrysophthalma* (*L.*), *D.C.*
f. 1, *Dickieana* (*Linds.*), *Nyl.*
- 3 *Ph. parietina* (*L.*), *D.N.*
f. 1, *viridescens*, *Cromb.*
2, *cinerascens*, *Leight.*
β. aureola (*Ach.*), *Nyl.*
f. 1, *congranulata*, *Cromb.*
γ. ectanea (*Ach.*), *Nyl.*
- 4 *Ph. polycarpa* (*Ehrh.*), *Nyl.*
f. 1, *lobulata* (*Flk.*), *Nyl.*
- 5 *Ph. lychna* (*Ach.*), *Nyl.*
B. *Cinerascens* (*Euphyseia*, *Cromb.*)
- 6 *Ph. intricata* (*Desf.*), *Schær.*
- 7 *Ph. ciliaris* (*L.*), *D.C.*
β. saxicola, *Nyl.*
- 8 *Ph. leucomela* (*L.*), *Mich.*
- 9 *Ph. speciosa* (*Wulf.*), *Nyl.*
β. hypoleuca (*Ach.*), *Nyl.*
- 10 *Ph. pulverulenta* (*Schreb.*), *Nyl.*
f. 1, *panniformis*, *Cromb.*
2, *deminuta*, *Cromb.*
3, *argyphca* (*Ach.*), *Nyl.*
β. detera, *Nyl.*
γ. angustata (*Hffm.*), *Nyl.*
δ. subpapillosa, *Cromb.*
- * *Ph. venusta* (*Ach.*), *Nyl.*
- * *Ph. pityrea* (*Ach.*), *Nyl.*
- * *Ph. muscigena* (*Ach.*), *Nyl.*
- 11 *Ph. aquila* (*Ach.*), *Nyl.*
- 12 *Ph. stellaris* (*L.*), *Nyl.*
β. leptalea (*Ach.*), *Nyl.*
γ. subobscura, *Nyl.*
- * *Ph. tenella* (*Scop.*), *Nyl.*
- 13 *Ph. aipolia* (*Ach.*), *Nyl.*
β. cercidia (*Ach.*), *Nyl.*
γ. anthelina (*Ach.*), *Nyl.*
- 14 *Ph. melops* (*Duf.*), *Nyl.*
- 15 *Ph. tribacia* (*Ach.*), *Nyl.*
- 16 *Ph. tribacoides*, *Nyl.*
- 17 *Ph. erosa* (*Borr.*), *Leight.*
- 18 *Ph. astroidea* (*Clem.*), *Nyl.*
f. 1, *teretiuseula* (*Ach.*), *Nyl.*
- 19 *Ph. obscura* (*Ehrh.*), *Nyl.*
β. virella (*Ach.*), *Nyl.*
- * *Ph. lithotea* (*Ach.*), *Nyl.*
- 20 *Ph. nlothrix* (*Ach.*), *Nyl.*
- 21 *Ph. adglutinata* (*Flk.*), *Nyl.*
f. 1, *sorediata*, *Nyl.*

Tribe XVII. **GYROPHOREI**, *Nyl.**Genus* I. **UMBILICARIA** (*Hffm.*), *Nyl.** *Lasallia*, *Mèrat.*Sp. 1 *U. pustulata* (*L.*), *Hffm.** *Agyrophora*, *Nyl.*2 *U. atropurpurea* (*Schær.*), *Nyl.**Genus* II. **GYROPHORA** (*Ach.*), *Nyl.*Sp. 1 *G. murina*, *Ach.*2 *G. proboscidea*, *Ach.*f. 1, *fimbriata* (*T. & B.*), *Mudd.*2. *exasperata*, *Ach.*β. *deplicans* (*Nyl.*), *Fr. fil.*3 *G. cylindrica*, *Ach.*f. 1, *denticulata*, *Ach.*2, *denudata* (*T. and B.*), *Mudd.*3, *fimbriata*, *Ach.*β. *Delisei* (*Despr.*), *Fr. fil.** *G. tornata*, *Ach.*4 *G. erosa* (*Webr.*), *Ach.*5 *G. torrefacta* (*Lghft.*), *Cromb.*f. 1, *subdividens*, *Nyl.*6 *G. hyperborea*, *Ach.*7 *G. arctica*, *Ach.*8 *G. polyphylla*, (*L.*), *T. and B.*f. 1, *glabra* (*Ach.*).2, *congregata*, *T. and B.*3, *lacera* (*Leight.*), *Cromb.*9 *G. flocculosa* (*Wulf.*), *T. and B.*10 *G. polyporrhiza* (*L.*), *Kbr.*f. 1, *luxurians* (*Ach.*), *Fr. fil.**Omissa in ALECTORIA.*a *Stirps*, *A. ochroleucæ.*Sp. *A. sarmentosa*, *Ach.*β. *cinnamomata* (*Fr.*), *Nyl.**Corrigenda in CLADONIA.*A *Phæocarpæ.** *Cl. gracillima*, *Norrl.*, est subspecies*Cl. furcata.*B *Erythrocarpæ.**F. intumescens*, *Cromb.*, *Cl. macilentæ*f. *scabrosæ*, pertinet ut forma ad *Cl. bacillarem.*

SYNOPSIS PYRENOMYCETUM.

(Continued from Vol. XIV., p. 97.)

4217. Sacc. Syll. *S. Micheliana*, *Fr.* Specimen in Herb. Berk. is = *Valsa leiphemia*, *vide* No. 1977.
4220. Sacc. Syll. *S. Sumachi*, *Schw.*, will be *Botryosphæria sumachi* (*Schw.*), No. 1439*. Large hyaline elliptical sporidia.
4225. Sacc. Syll. *S. junipericola*, *Schw.* Specimen in Herb. Berk. is a *Sphæropsis*.
4236. Sacc. Syll. *S. acinosa*, *Fr.* Specimens issued by Mougeot and Nestler are *Diplodia*.
4227. *Melogramma* (*Valsaria*) *atrofusca*, *Schw.* Sacc. Syll. No. 4227, Herb. Berk. No. 9925. Sporidia uniseptata 10-12 μ long.

Othia (Othiella) alnea, *Peck*, *Sacc. Syll.* No. 2804. var. **carnosa**, *Cooke*. *Cucurbitaria carnosa*, *Cooke* (1876).

Sporidia uniseptata, demum triseptata, hyalina, medio constricta 0.025×0.005 mm.

On branches of *Alnus*. Portland, Maine, U.S. (*Fuller*).

2577. **Byssosphæria (Trichosphæria) pachnostoma**, *B. & C.*
Sphæria pachnostoma, *B. & C.*

Peritheciis lanosis (1 mm. diam.). Ascis clavatis, sporidiis lanceolatis, continuis, hyalinis ($30 \times 5 \mu$).

On wood. Venezuela (*Herb. Berk.* No. 9620).

Sphæria truncata, *Schwein. Sacc. Syll.* No. 4275.

From authentic specimen this is the same as *Hypoxyylon marginatum* in its scattered condition, a form by no means uncommon.

2608. **Byssosphæria (Rosellinia) rhodomela** (*Sphæria*, *Byssisedæ*, *rhodomela*, *Schwein. Amer. Bor.* No. 1511), *nec Sacc.* No. 3263.

Peritheciis globosis, atris, mycelio tenui roseo insidentibus. Ascis linearibus. Sporidiis uniseriatis, ellipticis, continuis, fuscis ($10 \times 6 \mu$).

On rotten wood. United States (*Herb. Berk.* 9604).

2642. **Byssosphæria (Melanomma) rubiginosa**, *Cooke*. *Gibbera rubiginosa*, *Cooke in Herb.*

Peritheciis gregariis, superficialibus, subiculo tenui filamentoso fusco insidentibus, globosis, atro-rubiginosis, subrugulosis, ostiolo impresso. Ascis clavato-cylindricis, octosporis. Sporidiis biserialibus, lanceolatis, triseptatis, medio constrictis, hyalinis, demum pallide fuscis ($0.02-0.024 \times 0.004-0.006$ mm.).

On rotten wood. Poughkeepsie, New York (*Gerard* No. 83).

2610. **Byssosphæria (Rosellinia) picta**, Berk. (*Hypoxylon pictum*, Berk. in *Herb. Berk.* No. 8656).

Peritheciis subglobosis, basi appplanatis, atris, nitidis, mycelio tenui albo insidentibus ($\frac{3}{4}$ -1 mm. diam.). Ascis cylindraccis, octosporis. Sporidiis elliptico-lanceolatis, continuis, fuscis ($20-22 \times 8-10 \mu$).

On decorticated wood. Nilgherries.

2613. **Byssosphæria (Rosellinia) epileuca**, Berk. (*Hypoxylon epileucum*, Berk. in *Herb. Berk.* No. 8690). Sphæria albo-fulta, B. & Br., *Sacc. Syll.* No. 4231.

Sporidia not found. Ceylon (No. 1079).

Byssosphæria (Rosellinia) thelena, Fr. var. *elegans*, Duby. Ex specimine authentico Herb. Kewensis sub *Sphæria elegans*, Duby.

Byssosphæria (Rosellinia) pardalios, B. & C. (No. 4126).

Sporidia elliptica, curvula, continua, fusca $8-9 \mu$ long.

Byssosphæria (Rosellinia) imposita, Schweinitz in *Herb. Berk.*, No. 9601. *Sacc. Syll.* 4281.

Sporidia lanceolata, continua, fusca ($25 \times 6 \mu$).

Byssosphæria (Rosellinia) epixantha, B. & Br. in *Herb. Berk.* 8688. *Sacc. Syll.* No. 4230.

Sporidia not found.

Byssosphæria (Amphisphæria) diffusa, Schwein. *Sacc. Syll.* No. 4283. *Herb. Berk.* 9602.

Sporidia uniseptata, fusca, utrinque acuminata, medio constricta, $\cdot 018-\cdot 02 \times \cdot 006-\cdot 007$.

Byssosphæria (Amphisphæria) conferta, Schwein. *Sacc. Syll.* No. 4277. *Herb. Berk.* 9603.

Sporidia uniseptata, fusca, utrinque obtusa, medio constricta, $\cdot 012 \times \cdot 004$ mm.

Byssosphæria (Amphisphæria) rhodomphala, Berk.

Some confusion is made in the Sylloge with this species; it is twice described, under Nos. 2508 and 3619, whilst one of the references in 3619 belongs to 3624. Berkeley has given the specific name of *rhodomphalos* to only one species.

Psilosphæria (Zignoella) vincenziæ, Cooke. (*Sphæria macrostomella*? forma. *Cesati Fungi*, Born.)

Superficialis, denudata, peritheciis subglobosis, atris, glabris, ostiolo lateraliter compresso, platystomoides (?) Ascis clavatis, octosporis. Sporidiis lanceolatis, rectis, hyalinis, uniseptatis, deinde triseptatis ($\cdot 035 \times \cdot 004$ mm.).

In ligno denudato. Sarawak.

Rosellinia oblectans, Cke. *Sordaria*? *oblectans*, Ces. *Anthostomella oblectans*, *Sacc. Syll.* No. 1084.

Perithecia tota superficialia. Ascis cylindraccis. Sporidiis uniseriatis, subglobosis, fuscis ($\cdot 006 \times \cdot 004-\cdot 005$ mm.).

Rosellinia (Coniomela) barbatula, B. & C. in *Herb. Berk.* 9621.

Perithecia densissime gregaria, subglobosa, compressa, atra, opaca.

Rosellinia (Coniomela) opaca, *Cke. Fungi of Socotra.*

Sporidia $7 \times 6 \mu$.

3592. **Lasiosphæria Russellii**, *B. & C.* }

3593. **Lasiosphæria papilionacea**, *B. & C.* }

These are both forms of the same species which is included under the name of *Dimerosporium Collinsii* (Schwz.), Sacc. Syll. No. 2431.

Coniochæta (Chætomastia) exilis, *Schwein.*

Specimen from Schweinitz in Herb. Berk. 9648, has small pilose perithecia ($\frac{1}{8}$ mm. diam.), with fusiform triseptate brown sporidia ($16-18 \times 5 \mu$).

On rotten wood. Nazareth.

2643. **Byssosphæria (Chætosphæria) holophæa**, *B. & C.*

Perithecia subglobosa, pilosa, gregaria, bysso atro-fusco, rigido, nidulantia ($\frac{1}{2}$ mm. diam.) Ascis clavatis, octosporis. Sporidiis biseriatis, elongato-ellipticis, medio constrictis, triseptatis, fuscis ($22-24 \times 8 \mu$).

On branches. Pennsylvania U.S. Herb. Berk. 9631.

Coniochæta hericium, *Schwein. in Herb. Berk. 9653.*

Perithecia sparsa ($\frac{3}{10}$ mm. diam.) subglobosa, fusca, breviter hirsuto-pilosa, pilis subulatis, sparsis. Ascis cylindraccis, octosporis. Sporidiis ovalibus, continuis, fuscis ($12-14 \times 8 \mu$).

On rotten wood. Bethlehem, United States.

Psilosphæria (Walrothiella) Fendleri, *B. & C. in Herb. Berk. 9628.*

Perithecia densissime gregaria, globosa, atra, demum depressa. Sporidiis arcuatis, utrinque acutis, multinucleatis, hyalinis (50μ long).

On wood.

Psilospora (Melanopsamma) conospora, *B. & C. in Herb. Berk. 9727.*

Sporidia pyriformia, inæqualiter uniseptata, pallide fusca $8 \times 4 \mu$.

Lasiosphæria (Enchnosphæria) scopula, *C. & Pk.*

Perithecia villosa, subglobosa, atra ($\frac{1}{2}$ mm. diam.) Ascis lanceolatis, octosporis. Sporidiis elongato-fusiformibus, 10-12 septatis hyalinis ($70 \times 4 \mu$).

On naked wood. New York ; New Jersey.

Coniochæta (Hypocopra) brassicæ, *Klotsch. Rabh. Fungi Eur. 2217. Sacc. Syll. 859 ?*

Sporidia $65 \times 35 \mu$ continua, fusca.

Coniochæta detonsa, *Cooke.*

Perithecia sparsa vel gregaria, subglobosa, breviter villosa, atra. Ascis cylindraccis, octosporis. Sporidiis ovato-ellipticis, continuis, fuscis $10 \times 7\frac{1}{2} \mu$.

On naked fir wood. Albury, Jedburgh.

Lasiosphæria (Leptospora) emergens, *Schwz. Sacc. Syll. No. 4296. Herb. Berk. No. 9651.*

Sporidia continua, flexuosa, nucleata, hyalina, $30-32 \mu$ long.

Lasiosphæria setosa, *Schw. Sacc. Syll. 1289. Herb. Berk. No. 9650.*

We have not succeeded in finding sporidia.

Lasiosphæria cladosporiosa, Schw. Sacc. Syll. 4297. Herb. Berk. 9654.

No sporidia found.

Coniochæta (Chætomastia) squamulata, Schwz. Sacc. Syll. 4290. Herb. Berk. 9655.

Sporidia lanceolata, 3-5 septata, fusca, 20-40 μ long.

Psilosphæria (Melanopsamma) subfasciculata, Schw. Sacc. Syll. 4309. Herb. Berk. 9701.

Sporidia ellipsoidea, uniseptata, hyalina, $20 \times 8 \mu$.

Melanomma pyriosticta, Cooke Herb. Kewensis.

Perithecia sparsa, globosa, glabra, ostiolo minuto, fusco. Sporidiis fusiformibus, triseptatis, fuscis ($25-30 \times 6-7 \mu$).

On rotten wood. Twycross.

Melanomma ramincola, Schwein. in Herb. Berk. No. 9698.

Perithecia subcæspitosa, subglobosa, demum collapsa, atra, opaca. Ascis clavatis, sporidiis lanceolatis, triseptatis, fuscis, $25 \times 6 \mu$.

On *Pinus pinea*.

Melanomma inspissa, Schwein. Sacc. Syll. 4312, in Herb. Berk. No. 9702.

Sporidia triseptata, fusca (12-14 μ long).

Sphæria (Denudatæ) inconstans, Schw. Sacc. Syll. 4311. Herb. Berk. 9700.

We did not succeed in finding fruit.

Sphæria (Denudatæ) aggregata, Schw. Sacc. Syll. 4315. Herb. Berk. 9699.

Sporidia not seen.

Sphæria (Denudatæ) depolita, B. & C. Sacc. Syll. No. 4306.

At present we have found nothing in Berkeley's Herbarium to correspond to this name.

Fam. 8. CUCURBITARIÆ. Perithecia cæspitosa vel gregaria.

GEN. 1. **NITSCHKIA**, Otth. (Winter, Hedwigia, 1885, 104., CÆLOSPIERIA, Sacc. Syll. I., 91. Perithecia nigro, vel villo tenui candido insidentia. Sporidia octona, botuliformia hyalina.

2439. cupularis, Pers. ... 377 2441. radicalis, Cooke ... 382
2440. acervata, Karst. ... 380 2442. anceps, Sacc. & Roum. 6251

GEN. 2. **FRACCHIÆA**, Sacc. Syll. I., 93. Perithecia aggregata, crustula, stromatica insidentia. Sporidia allantoidea, hyalina.

* *Asci polyspori.*

2443. heterogenea, Sacc. 384 2448. rasa, Berk. ... 389
= polycocca, B. & Rav. 2449. subconnata, B. & C. 383
Car. Exs. No. 62. = subcongregata, B. &
Rav. Car. Exs. iv. 57
2444. cucurbitaroides, Speg. 385 2450. Saccardiana, Schulz. 6253
2445. brevibarbata, B. & C. 386 2451. Corduana, Sch. &
2446. moricarpa, Cooke ... 387 Sacc. ... 6254
= subconvexa, B. & Rav.
2447. callista, B. & C. ... 388

** PLEUROSTOMA. *Asci myriospori.*

2452. Candollei, Tul. ... 390

* * *Asci octospori.*

2453. introflexa, Berk. & Rav.

GEN. 3. **GIBBERA**, Fr. Sacc. Syll. I., 599. Perithecia setulosa, obsolete, papillata. Asci octospori.

* *Sporidia uniseptata, hyalina.*

2454. vaccinii, Fr. ... 2338 2456. guaranítica, Speg. 6539

2455. Borneensis, Ces. ... 2339

** *Sporidia pluriseptata, fusca.*

2457. cucurbitaroides, Speg. 3284.

GEN. 4. **GIBBERIDEA**, Fckl. Sacc. Syll. II., 132. Perithecia cæspitosa, papillata, glabrescentia.

* WALLROTHIELLA. *Sporidia continua, hyalina.*

2458. macilentia, C. & E. 1758

** GENUINA. *Sporidia fusoides, 6 septata, fuliginea.*

2459. visci, Fckl. ... 3345

* * ZIGNOELLA. *Sporidia multiseptata, hyalina.*

2460. proteus, B. & C. ... 3645 2462. vitis, Schulz. ... 3638

2461. Archeri, Berk. ... 3637

GEN. 5. **OTTHIA**, Ntke. Sacc. Syll. I., 735. Perithecia cæspitosa, erumpenti-superficialia carbonacea, vix papillata:

* EU-OTTHIA. *Sporidia didyma, fuliginea:*

2463. cratægi, Fckl. ... 2781 2474. syringæ, Fr. ... 2791

2464. pyri, Fckl. ... 2782 2475. xylostea, Fckl. ... 2792

2465. pruni, Fckl. ... 2783 2476. ulmi, Fab. ... 2793

2466. spireæ, Fckl. ... 2784 2477. corylina, K. ... 2794

2467. populina (P.) ... 2785 2478. urceolata, Fckl. ... 2795

2468. diminuta, K. ... 2786 2479. Brunaudiana, Sacc. 2796

2469. ambiens, Niessl. { 2787 2480. aceris, Wint. ... 2797

6120 2481. alni, Wint. ... 2798

2470. ilicis, Fab. ... 6121 2482. Monodiana, S. & R. 6625

2471. Doberæ, Pass. ... 2788 2483. lignyodes, B. & Br. 2799

2472. quercus, Fckl. ... 2789 2484. lisæ, Not. ... 2800

2473. rosæ, Fckl. ... 2790 2485. pteleæ, Rabh. ... 6626

* * OTTHIELLA. *Sporidia didyma, hyalina.*

2486. morbosa, Schw. ... 5295 2490. alnea, Peck. ... 2804

2487. seriata, Peck. ... 2801 = var. carnosa, Cke.

2488. Winteri, Rehm. ... 2802 (3 septata).

2489. Hazslinszkyi, Sacc. 2803

GEN. 6. **CUCURBITARIA**, Gray. Sacc. Syll. II., 307. Perithecia cæspitoso-erupentia, carbonacea, typice rugulosa.

* CUCURBITULA. *Sporidia continua fusca.*

- | | |
|--------------------------------|--------------------------------|
| 2491. conglobata, Fekl. 1011 | 2493. syringæ, Kichx. ... 1013 |
| 2492. myricariæ, Fekl.... 1012 | 2494. plicatula, B. & Br. 953 |

** MELANOMMA. *Sporidia triseptata fusca.*

- | | |
|--------------------------------|-------------------------------|
| 2495. Aspegrenii, Fekl. 3229 | 2500. Hendersoniæ, Fekl. 3262 |
| 2496. alpinum, Speg. ... 3253 | 2501. dioica, Mouq. ... 2911 |
| 2497. Requierii, Fab. ... 3254 | 2502. conglobata, Klot. in |
| 2498. cinerea, Karst. ... 3259 | Herb. Kew. |
| 2499. rhododendri, Nssl. 3260 | |

Sporidia 4-pluriseptata.

- | | |
|-------------------------------|------------------------------|
| 2503. occidentale, Ellis 3272 | 2504. pubens, Schw. ... 4221 |
|-------------------------------|------------------------------|

* * DICTYOSPORA. *Sporidia muriformia, colorata.*

- | | |
|--|--------------------------------------|
| 2505. berberidis (P.) ... 3935 | 2533. castaneæ, Sacc. ... 3961 |
| 2506. rufo-fusca, Fr. ... 3936 | 2534. hederæ, Wint. ... 3962 |
| 2507. laburni, Pers. ... 3937 | 2535. occulta, Fekl. ... 3963 |
| 2508. elongata, Fr. ... 3938 | 2536. occultata, Oud. ... 3964 |
| 2509. ulmea, K. ... 3939 | 2537. bicolor, Fekl. ... 3965 |
| 2510. ulmicola, Fekl. ... 3940 | 2538. congesta, C. & E. ... 3966 |
| 2511. gleditschiæ, Ces. ... 3941 | 2539. comptoniæ, C. & E. 3967 |
| 2512. coluteæ, Rabh. ... 3942 | 2540. acerina, Fekl. ... 3968 |
| 2513. caraganæ, K. ... 3943 | 2541. hirtella, Bacc. & Ar. 7120 |
| 2514. amorphæ, Wallr. ... 3944 | 2542. carpini, Sacc. ... 3969 |
| 2515. longitundinalis, Peck 7118 | 2543. juglandis, Fekl. ... 3970 |
| 2516. pithophila, Schm. & Kze. ... 3945 | 2544. rosæ, Wint. ... 3971 |
| 2517. delitescens, Sacc. 3946 | 2545. rubicola, Karst. F. Fenn. 879 |
| 2518. coronillæ, Fr. ... 3947 | 2546. protracta, Nees. ... 3972 |
| 2519. spartii, N. ... 3948 | 2547. salicina, Fekl. ... 3973 |
| 2520. acervata, Fr. ... 3949 | 2548. setosa, Wint. ... 3974 |
| 2521. rutæ, Fab. ... 6167 | 2549. pulchella, Fab. ... 3975 |
| 2522. conglobata, Ces. ... 3950 | 2550. eunymii, Cke. ... 3976 |
| 2523. Karstenii, Sacc. ... 3951 | 2551. confinis, Lev. ... 3977 |
| 2524. cratægi, Niessl. ... 3952 | 2552. dulcamaræ, Fr. ... 3979 |
| 2525. lauro cerasi, Phil. & Pl. ... 3953 | 2553. solitaria, Ell. ... 3980 |
| 2526. sorbi, Karst. ... 3954 | 2554. confluent, Plow. ... 3981 |
| 2527. ligustri, Fab. ... 3955 | 2555. tumorum, Schw. ... 3983 |
| 2528. rhamni, N. ... 3957 | 2556. insecure, Ellis ... 3984 |
| 2529. ailanthi, Rabh. ... 3958 | 2557. ribis, Niessl. ... 3985 |
| = negundinis, Wint. | 2558. botryosa, Tode. ... 3986 |
| 2530. naucosa, Fr. ... 3959 | 2559. Aspegrenii, Ces. ... 3987 |
| 2531. cingarus, Schulz. & Sacc. ... 7119 | 2560. umbilicata, Ell. ... 7121 |
| 2532. coryli, Fekl. ... 3960 | 2561. coremæ, Ell. & Er. 7117 |
| | 2562. vasaformis, Fekl. F. Rhen. 954 |

Species incertæ.

- | | |
|-------------------------------|--------------------------------|
| 2563. nidula, Schw. ... 4216 | 2568. molliuscula, Schw. 4224 |
| 2564. varia, Pers. ... 4218 | 2569. junipericola, Schw. 4225 |
| 2565. stipata, Schw. ... 4219 | 2570. hyperici, Schw. ... 4226 |
| 2566. parasitans, Schw. 4222 | 2571. acinosa, Fries ... 4236 |
| 2567. mezerci, Schw. ... 4223 | |

FUNGI NOVI BRASILIENSES.

AUCTORE DR. G. WINTER.

Fungi omnes, hic descripti, ab amico E. Ule in vicinitate urbis Sao-Francisco, provincia Sta. Catharina, Brasiliæ, lecti sunt. Descriptiones ampliores Meliolarum et Asterinearum novarum ab Ule collectarum in "Flora," 1887, dabo.

1. Diorchidium pallidum. *Winter, nov. spec.*

Acervuli hypophylli, sparsi gregariive, macula indeterminata, irregulari, mox parva, mox late effusa, luteola insidentes, minutissimi, punctiformes. Acervuli uredosporarum rotundati seu irregulariter parumque oblongati, ab epidermide inflata, demum fissa longe velati, luteo-fusculi. Uredosporæ subglobosæ vel ovoideæ, dense echinulatæ, luteolæ, 18-19, 5 μ diam., vel usque 27 μ longæ, 18-20 μ crassæ. Acervuli teleutosporarum punctiformes hemisphærico-pulvinati, ceracei, compactiusculi. Teleutosporæ ovato-cuneatæ seu subellipticæ, apicem versus parum attenuatæ rotundatæque, basi plerumque truncatæ vel late rotundatæ luteolohyalinæ, stipite prælongo, lato, persistente, hyalino suffultæ, 28-29 μ longæ, 12-14 μ crassæ.

In foliis vivis languidisque plantæ ejusdam scandentis (Ule, No. 143).

2. Uredo Janiphæ. *Winter, nov. spec.*

Acervuli solitarii gregariive, plerumque hyporarius etiam epiphylli, sæpe ad petiolos et ramulos juniores, ad folia maculis irregularibus rotundatisve, sæpe confluentibus, indeterminatis, fuliginosis insidentes, rotundati vel angulati, minuti, $\frac{1}{2}$ -1 millim. lati; ad nervos foliorum, petiolos ramulosque juniores plus minusve elongati, sæpe confluentes, 5 mill. longi, primo ab epidermide, postulatim inflata, luteola velati, mox autem nudi, applanati, epidermidis fissæ laciniis cincti, pallide luteoli. Sporæ globosæ vel ellipticæ, interdum ovatæ, dense minutissimæque aculeolatæ, fuliginæ, 19, 5-25 μ diam., vel usque 28, 5 μ longæ.

In foliis vivis Janiphæ Manihot (Ule, No. 362).

3. Hypocrella luteo-olivacea. *Winter, nov. spec.*

Stromata subglobosa vel crasse pulvinata, sessilia, ramulos tenuiores conferte circumdantia, superficialia, facile solubilia, sæpe mutua pressione plus minusve angulata, extus luteo-olivacea, peritheciis parum exstantibus verrucosa, intus lutea, ca. 1-3 millim. lata. Perithecia immersa, vertice tantum prominula, elongato-ovoidæ,

in collum crassum, conicum attenuata, 150-180 μ lata. Asci elongato-cylindracei, deorsum stipitiforme attenuati, 8-spori, 180-200 μ longi, 9 μ crassi. Sporae fiiiformes, hyalinae, dense septatae et (in ascis) in artienlos cylindricos, utrinque truncatos, 8-9 μ longos, 2, 5 μ crassos secedentes.

Ad ramulos emortuos (Ule, No. 337).

4. Saccardia ferruginea. *Winter, nov. spec.*

Perithecia gregaria, forma magnitudineque varia, plerumque subglobosa, saepe parum angulata, tenuissime membranacea, parenchymatica, ferruginea, mycelio late effuso, densissimo, saepe parenchymatice contexto, ferrugineo, in mycelio Asterinae ejusdam parasitico, insidentia, 44-80 μ diam. Hyphae mycelii valde ramosae, repentes, dense septatae, plus minus torulosae flexuosaeque, tenues. Asci in quoque perithecio pauci, 3-10 (rarius plures), subglobosi, fere sessiles, 8-spori, 32 μ longi, 25-29 μ lati. Sporae conglobatae, oblongae, inaequaliter didymae, triseptatae, plerumque cellula secunda tantum septo unico longitudinali praedita, utrinque rotundatae, subhyalinae, 13-14 μ longae, 6 μ crassae.

Ad folia viva Myrtaceae ejusdam (Ule, No. 165).

Species valde memorabilis et fortasse melius genus novum constituens.

5. Dimerosporium afflatum. *Winter, nov. spec.*

Mycelium plagas rotundatas s. subirregulares, interdum confluentes, $\frac{1}{2}$ -1 $\frac{1}{2}$ millim. latas, epiphyllas, sparsas, atras, opacas, tenuissimas formans, e hyphis repentibus, arcissime adnatis, valde ramosis, crassis, fuliginis dense intertextum. Hyphopodia numerosa, alternantia, sessilia, hemisphaerica, saepe parum crenata vel angulata. Perithecia densissime aggregata, inter mycelii hyphas confertissima, angulato-subglobosa, contextu indistincto, tenuissimo, dilutissime fuliginea, appendiculis paucis filiformibus, curvatis flexuosisve, hyalinis obsita, usque 80 μ diam. Asci in quoque perithecio pauci (4-6), globosi seu ovati, sessiles, 8-spori, 37-41 μ longi, 26-36 μ crassi. Sporae conglobatae, oblongae, parum inaequilaterales, utrinque rotundatae, medio septatae, vix constrictae, cellula inferiori parum angustiori, hyalinae, 23-25 μ longae, 10 μ crassae.

In foliis vivis plantae ignotae (Ule, No. 368).

6. Dimerosporium aëruginosum. *Winter, nov. spec.*

Perithecia densissime aggregata, soros plerumque epiphyllas, rotundatos irregularesve, saepe e pluribus vel multis minoribus compositos, atros, velutinos formantia, mycelio e hyphis repentibus, dense intertextis, aërugineo-atris formato insidentia globoso-hemisphaerica, poro simplici, sed distincto pertusa, atra, membranacea, pilis copiosis, longis, flexuosis, atris ubique dense obsita, 125-135 μ diam. Asci elliptici, vertice rotundati, brevissime stipitati, 8-spori, 44-54 μ longi, 20-23 μ crassi. Sporae conglobatae, oblongo-subclavatae, utrinque rotundatae, medio septatae, vix constrictae, dilutissime fuliginis, 18-19, 5 μ longae, 7-8 μ crassae.

In foliis vivis *Mikaniae* spec. cujusdam (Ule, No. 245).

Dimerosporia *Baccharidis* valde affine, sed præcipue colore mycelii, ascorum forma etc. distinctum.

7. *Dimerosporium subpilosum.* *Winter, nov. spec.*

Perithecia dense aggregata, soros parvos, rotundatos vel irregulares, $\frac{1}{4}$ -1 millim. latos, epiphyllous, sparsos, atros formantia, globosa, membranacea, atra, poro simplici pertuso, pilis repentibus, radiantibus, flexuosis, fusco-atris, longis parce obsita, 56-60 μ diam. Asci late obovati vel ellipsoidei, sessiles, 8-spori, 30-32 μ longi, 16-18 μ crassi. Sporæ conglobatæ, clavatæ, utrinque rotundatæ, medio septatæ, et parum constrictæ, interdum subinaequilaterales, hyalinae, 12-13 μ longæ, 3, 5-4, 5 μ crassæ.

In foliis vivis *Chiococcae* speciei cujusdam (Ule, No. 391).

8. *Didymosphæria filicina.* *Winter, nov. spec.*

Perithecia gregaria, in foliolis plerumque dealbatis epiphylla, immersa, globosa, poro simplici pertusa, vertice late papillæformi tantum prominula, atra, coriacea, 80-90 μ diam. Asci fasciculati, oblongi, utrinque attenuati, substipitati, 8-spori, 44-48 μ longi, 12, 5 μ crassi. Sporæ di-tristichæ, bacilliformes, cylindrico-subclavatæ, utrinque rotundatæ, medio septatæ, haud constrictæ, hyalinae 14-16 μ longæ, 3 μ crassæ. Paraphyses parum distinctæ, filiformes, plerumque mucosæ.

Ad folia subviva *Gymnogrammes colomelani* Kaul f. (Ule, No. 486).

9. *Didymosphæria innumerabilis.* *Winter, nov. spec.*

Perithecia in maculis magnis arescendo-candicantibus vel pallide fuliginis, determinatis, angulato-rotundatis seu irregularibus, margine luteolo angusto et area fuscidula latiori cinctis, usque 12 mill. latis hypophylla, gregaria, sæpe conferta s. aggregata, sub-superficialia, subglobosa, poro simplici pertusa, membranacea, atra, 98-110 μ diam. Asci e basi latiori ovata sursum attenuati, sessiles, 8-spori, 35-40 μ longi, 11, 5-12, 5 μ lati. Paraphyses tenuissimæ, filiformes, plerumque mucosæ. Sporæ conglobatæ, bacillari-subclavatæ, interdum parum curvatæ, medio septatæ, leniterque constrictæ, plerumque utrinque, semper autem deorsum subattenuatæ, rotundatæ, hyalinae, cellula superiori parum latiori, 16-18 μ longæ, 4, 5 μ crassæ.

In foliis vivis *Passifloræ* cujusdam (Ule, No. 194).

10. *Physalospora multipunctata.* *Winter, nov. spec.*

Perithecia numerosa, supra foliorum partes magnas dense gregarieque sparsa, macula permagna, indeterminata irregularique, sordide fuscidula s. luteola insidentia, solitaria in tuberculo e parenchymate foliorum formato, utrinque prominulo inclusa, globosa, ostiolo papillæformi pertuso erumpenti, haud vero prominentia, atra, carbonacea, fragilia, 190-200 μ diam. Asci oblongo-clavati, longissime pedicellati, 8-spori, 50-62 μ longi (p. sporif.), 19, 5-23 μ crassi. Sporæ conglobatæ, oblongæ, supra medium latissimæ, utrinque rotundatæ, hyalinae, nubilosæ, 18 μ longæ, 7 μ crassæ.

Ad folia viva *Melastomaceæ* cujusdam (Ule, No. 419).

11. *Herpotrichia ferox*. *Winter, nova species.*

Perithecia densissime aggregata, acervulos irregulares, pulvinatos, inaequales, aterrimos, velutinos formantia, subienlo e hyphis repentibus, fuscis, torulosis ramosisque formato, insidentia, globosa, vertice rotundata, demum collapsa et concava, undique vertice excepto setis rigidis, crassis, acutis, opace atris, divergentibus, 360-370 μ diam. Setae basi 10, 5 μ crassae. Asci anguste clavati, vertice late rotundati, deorsum in stipitem sublongum, torulosum attenuati, 8-spori, 142-180 μ longi, 19-20 μ crassi. Sporae 2-3 stichae elongato-fusoideae, curvulae, 8-9 septatae, ad septa vix contractae, fuscae, cellulae extimae pallidiores, interdum fere hyalinae, 40-60 μ longae, 9 μ crassae. Paraphyses tenuissime filiformes, plerumque diffusae.

Ad corticem putridum (Ule, No. 113).

12. *Xylaria palmicola*. *Winter, nov. spec.*

Stroma plus minusve erectum vel in parte inferiori ascendens, flexuosum, gracillimum, simplex, rarius teres, plerumque subcompressum, saepe parum tortuosum, opace fuscoatrum, basi villo longo, fusco, sed dense adpresso vestitum, usque 14 centim. longum, 1-1½ mill. crassum. Clavula perithecigera stipite crassior, multo brevior, cylindrica, saepe parum inaequalis, a peritheciis vix exstantibus nonnihil tuberculosa, ab ostioliis exsertis aspera, apice acuta sterili, usque 24 mill. longa, 2-4 mill. crassa. Perithecia globosa vel late ovoidea, immersa, ostiolo papillaeformi prominentia. Asci cylindricei sursum in stipitem longissimum attenuati, 8-spori, 137-150 μ longi (pars sporif. : 74-92 μ), 9-10, 5 μ crassi. Sporae monostichae, ellipsoideae, valde inaequilaterales, cymbiformes, utrinque subacutae, opace fusco-atrae, 14-16 μ longae, 7 μ crassae.

In fructibus putridis Palmarum (Ule, No. 353).

13. *Phyllachora rhopographoides*. *Winter, nov. spec.*

Stromata sparsa, epiphylla, tuberculiformia, plus minusve irregularia, mox angulato-rotundata, mox secus nervulos laterales elongata, ab epidermide pustulatum inflata tecta, convexa vel subapplanata, grisea, usque 2 millim. longa, tota e parenchymate fusco-atro, e cellularis in scribus verticalibus constipatis formato constantia. Perithecia s. locula in quoque stromate parca, dense stipata, tota immersa, haud exstantia, angulato-elliptica vel irregularia, ostiolo plerumque laterali, papillaeformi vix prominentia, usque 300 μ lata. Asci fere cylindricei, utrinque attenuati, substipitati, 8-spori, 106-124 μ longi, 12, 5 μ crassi. Paraphyses copiosae, filiformes, submucosae. Sporae obliquemono vel pro parte subdistichae, oblongae, inaequilaterales, utrinque rotundatae saepeque attenuatae, hyalinae, saepe medio spurie uniseptatae, 19-25 μ longae, 7 μ crassae.

Ad folia subviva Pteridis aquilinæ (Ule, No. 274).

14. *Phyllachora infuscans*. *Winter, nov. spec.*

Stromata plerumque in macula longitudinaliter effusa, fuscidula, usque 1 centim. longa amphigena, subgregaria, saepe seriata et confluentia, lineari-lanceolata, utrinque obtusiuscula, convexula,

atra, subnitida, longitudinaliter striato-rimosa, 1-2 mill. longa, e parenchymate denso, fusco-atro contexta. Perithecia seu locula in quoque stromate pauca, dense stipata, tota immersa, haud exstantia, subglobosa vel oblonga, mutua pressione angulata et irregularia, ostiolo haud visibili, a stromatis substantia non diversa. Asci elongato-oblongi vel oblongo-cylindracei, sursum parum, deorsum magis attenuati, breviterque stipitati, vertice rotundati, 8-spori, 124-142 μ longi, 18-26 μ lati. Sporae subdistichae, ellipsoideae vel oblongae, saepe utrinque acutiusculae, parum inaequilaterales, hyalinae, 23-27, rarius usque 30 μ longae, 9, plerumque 10, 5 μ crassae. Paraphyses copiosae, filiformes.

Ad folia viva Paspali (Ule, No. 271).

15. *Phyllachora atroinquans*. Winter, nov. spec.

Stromata amphigena, greges folium longe lateque obducentes, rarius minores, nigrescentes, indeterminatos irregularesque formantia, immersa, ab epidermide denigrata tecta, rotundata, saepe obtuse angulata, haud raro subconfluentia, humida plana vel perparum convexa, sicca depressa, impressa vel demum fere umbilicata, rugulosa, atra, subnitentia, $\frac{1}{2}$ millim. lata. Perithecia in quoque stromate parca, plerumque unicium, depressa sublenticularia, in stromatis superficie ostiolo papillaeformi prominentia, 270 μ lata. Asci elongato-elliptici, seu elliptico-subpyriformes, sessiles, 8-spori, 62-66 μ longi, 26-27 μ crassi. Sporae conglobatae, ovato-oblongae, supra medium latissimae, utrinque rotundatae, hyalinae, continuae, 25-28, 5 μ longae, 10-10, 5, latae.

Ad folia arida Bromeliaceae adhuc indeterminatae (Ule, No. 481).

16. *Phyllachora Ulei*. Winter, nov. spec.

Stromata sparsa, amphigena, plerumque autem epiphylla, rotundata, saepe angulata vel subirregularia, multo rarius elongata, usque 5 millim. lata, crustaeformia, applanata, ab ostiolis perparum prominulis umbilicato-punctulata, caeterum laevia, atra, subnitida. Perithecia in quoque stromate numerosa, densissime stipata, subglobosa, saepe mutua pressione angulata vel parum depressa, ostiolo minutissimo, papillaeformi, pertuso, demum umbilicato, 83-94 μ lata. Asci oblongo-cylindracei, utrinque attenuati, vertice truncato, substipitati, 90-106 μ longi, 12, 5 μ lati. Spora oblique monostichae, vel pro parte distichae, oblongae, utrinque acutiusculae, subinaequilaterales, continuae, hyalinae, 18-20 μ longae, 5, 5 μ latae. Paraphyses tenuissimae, filiformes, mucosae.

Ad folia viva plantae ignotae scandentis (Ule, No. 143).

17. *Phyllachora applanata*. Winter, nov. spec.

Stromata in utraque foliorum pagina visibilia, sparsa, sine macula, angulato-rotundata vel oblonga vel irregularia, applanata, crustaeformia, atra, opaca, rugulosa, ab ostiolis perithecorum punctulato-verruculosa, ca. 1 millim. longa, $\frac{1}{2}$ millim. lata. Perithecia in quoque stromate plura, conferta, immersa, globosa, ostiolo papillaeformi stromatis superficiem prominentia, ca. 140 μ lata. Asci cylindracei, utrinque, deorsum autem magis attenuati, vel

cylindrico-clavati, breviter stipitati apice truncati, 8-spori, 90-106 μ longi, 10, 5-14 μ lati. Sporæ ellipsoideo-subcymbiformes, utrinque acutiusculæ, parum inæquilaterales, continuæ, hyalinæ, 14 μ longæ, 4, 5 μ latæ.

Ad folia viva Xanthoxyli (Ule, No. 262).

18. Auerswaldia clypeata. *Winter, nova spec.*

Stromata sparsa, epiphylla, interdum 2-3 conferta et confluentia, orbicularia, vel parum angulata sinuataque, scutiformia, centro convexo, late et depresso conica, atra, nitida, demum applanata, opaca et rugosa, $\frac{1}{2}$ -1 millim. lata. Perithecia in quoque stromate pauca, sæpe solitaria, lenticularia vel depresso subconoidea, tota immersa, ostiolo tantum vix papillæformi prominula, usque 0, 8 millim. lata. Asci cylindrici, deorsum stipitiforme attenuati, 8-spori, 140-150 μ longi, 16-20 μ lati. Sporæ oblique monostichæ vel pro parte distichæ, ellipsoideo-oblongæ, utrinque parum attenuatæ rotundatæque, utroque fine luteo-fuliginæ, medio subhyalinæ, continuæ, 25-27 μ longæ, 8-9 μ crassæ. Paraphyses copiosæ, tenuissime filiformes.

Ad folia subemortua Smilacis (Ule, No. 280).

19. Geoglossum pumilum. *Winter, nov. spec.*

Parvum, nigricans; clavula ovata vel subdifformis, capitata, distincta, parum et irregulariter compressa, glaberrima (!), usque 3 mill. longa, ut videtur viscosa. Stipes subcylindricus, sæpe parum compressus et sulcatus, usque 6 mill. longus, fasciculis pilorum fuscidulis, squarrosis obsitus. Asci cylindræo-clavati, sessiles, 8-spori, 230-255 μ longi, 25-27 μ lati. Paraphyses filiformes, sursum in clavam crassam, fuscidulam, usque 10 μ latam incrassatæ, interdum apicem versus articulatæ, rectæ. Sporæ cylindricæ, utrinque parum angustatæ, rotundatæque, subcurvatæ, plerumque 15-septatæ, ad septa perparum constrictæ, fusæ, 94-110 μ longæ, 7 μ crassæ.

In terra argillacea (Ule, No. 338).

20. Peziza (Sarcoscypha) brasiliensis. *Winter, nov. spec.*

Cupulæ sparsæ, sessiles, carnosæ, primo hemisphæricæ, demum magis explanatæ, disciformes, marginatæ, usque 8 mill. latæ, disco plano, aurantiaco-rubro, margine erecto vel incurvo, setis rigidis, longis, fuscis, crassis, septatis obsito cinctæ, extus pallidiores. Asci elongato-cylindræci, deorsum longe attenuati, vertice fere truncati, 8 spori, 260-280 μ longi, 18 μ crassi. Sporæ monostichæ, ellipsoideæ, utrinque late rotundatæ, hyalinæ, dense grosseque reticulatæ, 25-27 μ longæ, 14 μ crassæ. Paraphyses ascorum longitudine vel eos parum superantes, filiformes, apicem versus clavæformes, usque 9 μ incrassatæ.

Ad terram humidam, in quicquiliis putridis (Ule, No. 322).

21. Ravenelula nigrocapitata. *Winter, nov. spec.*

Apothecia sparsa, hypophylla, minutissima, depresso globosa, sessilia, in ambitu hyphis erectis intense æruginosi, apice capitulo globoso vel clavæformi, æruginoso coronatis cincta, sine

excipulo proprio, 83-128 μ diam. Asci elliptici vel ovato-elliptici, sessiles, 8-spori, 24-27 μ longi, 12, 5-16 μ lati, paraphysibus crassis, æruginoso-capitatis mixti. Sporæ inordinatæ, conglobatæ, oblongo-clavatæ, utrinque rotundatæ, medio uniseptatæ, parum constrictæ, cellula superiori latiori, hyalinæ, 11, 5-12, 5 μ longæ, 4 μ crassæ.

In foliis vivis Solani speciei cujusdam (Ule, No. 399).

22. Phoma palmicola. *Winter, nov. spec.*

Perithecia sparsa vel gregaria, mox sine macula, mox in maculis atris, linearibus vel irregularibus, determinatis, usque 10 mill. longis, interdum confluentibus immersa, depresso subconica, vertice papillæformi demum pertuso erumpentia, atra, membranacea, 300-320 μ longa, 120-123 μ alta. Sporæ numerosissimæ, oblongo-fusoideæ, utrinque acutiusculæ, guttulis 2 magnis præditæ, hyalinæ, rectæ, 6-7 μ longæ, 2, 5 μ crassæ.

Ad folia emortua Palmarum (Ule, No. 256).

23. Septoria Mikaniæ. *Winter, nov. spec.*

Maculæ amphigenæ, sparsæ vel subgregariæ, angulato-rotundatæ s. irregulares, sæpe lobatæ repandæque, luteo-fuligineæ, centro sæpe exaridæ albidæque, linea elevata lutea et area determinata, purpurea, plus minusve lata circumdatæ, usque 3 mill. latæ, interdum confluentes. Perithecia sparsa, immersa, subglobosa, poro pertusa, vertice demum erumpentia, membranacea, atra. Sporæ filiformes, utrinque parum attenuatæ, flexuosæ curvatæve, obscure triseptatæ, hyalinæ, 18-29 μ longæ, 1, 5 μ crassæ.

In foliis vivis Mikaniæ (Ule, No. 245).

24. Septoria Centellæ. *Winter, nov. spec.*

Maculæ sparsæ s. subgregariæ, plerumque magnæ, rotundatæ s. irregulares, sæpe angustatæ, usque 5 mill. latæ, haud raro confluentes, fuliginæ, centro pallidiori, arescendo-griseæ vel albicantes, arca lata, atro-purpurea, indeterminata cinctæ. Perithecia in centro macularum gregaria sparsave, minuta, globosa, atra, vertice erumpentia, poro pertusa. Sporæ filiformes, tenuissimæ, rectæ vel subflexuosæ, indistincte pluri-septatæ, utrinque attenuatæ, hyalinæ 30-45 μ longæ, 2 μ crassæ.

In foliis vivis Centellæ asiaticæ (Ule, No. 192). Ab omnibus speciebus Septoriæ in Hydrocotyle parasitica maculis et sporarum longitudine valde diversa.

25. Cylindrosporium guttatum. *Winter, nov. spec.*

Acervuli pauci in foliorum pagina inferiori gregarii, maculis rotundato-irregularibus, fuscidulis, indeterminatis, minutis insidentes, interdum autem sine macula sparsi, subepidermide parum inflata, demum vertice perforata nidulantes, rotundati, depresso et late subconoidi. Sporæ filiformes, tenuissimæ, hyalinæ, flexuosæ, 53-70 μ longæ, 2 μ crassæ, in guttulo magno ceraceo pallido expulsæ.

In foliis languidis Hypoxidis (Ule, No. 297).

SOME AUSTRALIAN FUNGI.

BY M. C. COOKE.

Agaricus (Collybia) olivaceo-albus, *Cke. & Mass.*

Pileo carnosus, tenui, convexo-plano, demum depresso, glabro, leniter rugoso, nitido, olivaceo-fuliginoso; margine lævi; stipite subæquali, glabro, albido, farcto, rigido, deorsum abrupte atro, radicato-attenuato; lamellis latissimis, adnexis, subdistantibus, planis, candidis; sporis magnis, ellipticis, $14 \times 7 \mu$.

On the ground, under she-oaks (*Casuarina quadrivalvis*). Lake Bonney. (*Wehl., No. 3, cum icon.*)

Pileus 2 in. across; stem 3 in. long, 5 mill. thick; gills 8 mill. broad.

Agaricus (Collybia) ozes, *Fr. var. crassipes*, *Cke. & Mass.*

Pileo conico-campanulato, obtuso, tenui, striato, stipite sursum subattenuato, striatulo, umbrino, cavo, lamellis pallido-fuscis.

On low damp ground. Lake Bonney. (*Wehl., No. 22, cum icon.*)

Pileus 1 in. high and broad; stem 3 in. long, 1 cm. diam.

Agaricus (Mycena) subcorticalis, *Cke. & Mass.*

Pileo tenui, convexo-explanato, glabro, lævi, lilacino, disco testaceo; stipite adscendente, tenui, æquali, fistuloso, glabro, lamellisque adnatis, ventricosis, sub-confertis, pallide lilacino; sporis ovatis, $5 \times 4 \mu$.

On log of *Banksia*. Lake Bonney. (*Wehl., No. 16, cum icon.*)

Pileus $\frac{1}{2}$ - $\frac{3}{4}$ inch; stem 1 inch or more long, 2 mill. thick.

Agaricus (Pleurotus) australis, *Cke. & Mass.*

Pileo carnosus, convexo, glabro, umbrino; stipite sublaterali, brevi, crasso, albo-tomentoso, solido; lamellis albis, latis, distantibus, decurrentibus; sporis cylindraceo-ellipticis, rectis curvulisve, $16-18 \times 4 \mu$.

On roots of *Leptospermum*. Lake Bonney. (*Wehl., No. 14, c. icon.*)

Pileus 2-3 in. or more diam.; stem about an inch long and thick.

Agaricus (Pluteus) Wehlianus, *Musler.*

Pileo carnosus, e campanulato expanso, obtuse umbonato, lævi, nitido, ochraceo-albo, disco obscuriori, stipite procero, solido, deorsum incrassato, sursum æquali, albido, glabro, lamellis liberis, latis, ventricosis, ex albo carneis, sporis pallide ochraceis, ellipticis, guttulatis, $14-16 \times 10 \mu$.

On rotten wood, or on the ground. Lake Bonney. (*Wehl., No. 11, c. icon.*)

Pileus 3 in. or more diam.; stem 6-8 inches long, $\frac{1}{2}$ in. thick, nearly an inch at the base.

Agaricus (Hebeloma) olidus, *Cke. & Mass.*

Pileo carnosus, convexo, viscido, rufo-brunneo, squamulis pallidis superficialibus consperso, margine incurvo pallidiore, stipite subæquali, fistuloso, glabro; lamellis lanceolatis, attenuato-subliberis, pallido-argillaceis, sporis $10 \times 6 \mu$. Odor fœtidus.

On stony ground. Lake Bonney. (*Wehl., No. 7, c. icon.*)

Pileus scarcely 1 inch; stem 1 inch long, 4 mill. thick.

Agaricus (Flammula) purpureo-nitens, *Cke. & Mass.*

Pileo convexo, carnoso, glabro, nitente purpureo-fusco, margin lævi, stipite æquali, adscendente, fibrilloso, solido, pallidiore, carne pallido; lamellis adnexis, subdistantibus, latis, ferrugineis, sporis ovatis, cinnamomeis ($8 \times 5 \mu$).

On wood. Lower Murray River, Victoria. (*French*, 15.)

Pileus 1 inch diam., stem 2 in. long, 2-3 lines thick.

Agaricus (Flammula) limonius, *Cke. & Mass.*

Pileo carnoso, convexo-plano, glabro, lævi, udo, sulphureo; stipite æquali, faretto, flavido albo, lævi; lamellis subadnatis, sulphureis, demum aquose cinnamomeis. Sporis ellipticis, $15-16 \times 8-9 \mu$.

On rich soil. Lake Bonney. (*Wehl.*, No. 19, c. icon.)

Pileus 2-3 inches; stem 2-3 inches long, 7-8 mill. thick.

Agaricus (Naucoria) russus, *Cke. & Mass.*

Pileo convexo-explanato, tenui, lævi, glabro, lateritio-rufo, margine lævi, stipite æquali, subconcolore, deorsum albido-tomentoso, fistuloso, carne pallido, lamellis liberis, ventricosis, subdistantibus, ferrugineis; sporis ellipticis ($8 \times 4 \mu$).

On the ground. Goulbourn Valley, Victoria.

Pileus scarcely 1 in. broad; stem 2 in. long, 2 lines thick.

Agaricus (Crepidotus) stromaticus, *Cke. & Mass.*

Pileo alutaceo, sessili, tenui, flaccido, furfuraceo, resupinato, e stromate albo membranaceo-floccoso oriundo, lamellis centro concurrentibus, subdistantibus, planis, e pallido fusco-cinnamomeis. Sporis globosis, asperulis (8μ diam.).

On bark. Daintree River. (*Pentzke*.)

Pileus about half an inch.

Lenzites nivea, *Cke.*

Pileo suberoso-coriaceo, firmo, obsolete zonato, scrobiculato, niveo, postice subdiscoideo, margine acuto, tenui, lamellis rectis, tenuibus, latis, vix confertis, inæqualibus, plerumque laceratis, candidis.

On trunks. Russell River, Q. (*Sayer*, 50.)

Pileus 3-4 inches; gills $\frac{1}{2}$ inch broad or more; substance thin, white; whole plant snowy white.

Panus carbonarius, *Cke. & Mass.*

Pileo carnoso-lento, tenui, inæquali, excentrico dimidiatoque, lævi, glabro, umbrino, stipite brevi, pallido, deorsum subattenuato, pallido. Lamellis perangustis, confertis, attenuato-decurrentibus, albidis, acie tomentoso. Sporis ellipticis, albis, $12 \times 5 \mu$.

On spots where ferns had been burnt. Lake Bonney. (*Wehl.*, No. 6, c. icon.)

Pileus 2 in. broad and long, flabelliform or infundibuliform; stem $\frac{1}{2}$ in. long, scarcely as thick.

Tulostoma maxima, *Cke & Mass.*

Stipite elongato, æquali, deorsum fibrilloso, sursum striato-sulcato, peridio glabro, concolori, ore rotundo, capillitio sporisque late aureo-fulvis. Sporis globosis, verrucosis, 7μ diam.

On the ground. Gascoyne River. (*Mrs. Gribble*.) Whole plant pale ochre when dry.

Stem 7-8 inches long, $\frac{1}{3}$ inch thick; peridium $\frac{3}{4}$ inch diam. Threads of capillitium equal, half the diameter of the spores, with here and there short clavate, hyaline branchlets.

Xylopodium ochroleucum, *Cke. & Mass.*

Stipitatum. Peridium globosum (2 in.) verrucosum; verrucis magnis, pyramidalis, persistentibus. Stipite erecto, firmo, crasso, indurato, solido, æquali, imbricato-squamoso (3 in. long, vix 1 in. crass.) Sporis capillitioque ochroleuco; filamentis subsimplicibus, tenuibus. Sporis globosis, lævibus (8 μ diam.) cum corpusculis sporiformibus, allantoideis, hyalinis (15-20 \times 4-5 μ) immixtis.

On the ground. Near Darling River. (*Bennett*.)

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NOTICE TO BINDER.

Pages 173 and 174 in our last number to be *cancelled*, on account of an error, and pages 173 and 174 issued with this number to be substituted.

Grevillea,

A QUARTERLY RECORD OF CRYPTOGAMIC BOTANY
AND ITS LITERATURE.

SOME AUSTRALIAN FUNGI.

BY M. C. COOKE.

(Continued from p. 95.)

Lycoperdon stellatum, Cke. & Mass.

Sessile, subglobosum, $1\frac{1}{2}$ in. diam. Peridium tenue, flaccidum, primum verrucis crassis stellatis spinosis tectum, demum in fragmentis secedens, dein superficies glabrum, ore minuto-lacerato. Capillitio sporisque sordide olivaceo, filamentis subrigidis, sparse ramosis, sporis globosis, glabris ($5\ \mu$ diam.).

On the ground. Israelite Bay, S. W. Australia. (Miss Brooke.)

Threads of capillitium of equal thickness to the diameter of the spores, continuous with the scanty floccose sterile base of the peridium. Allied to *L. cruciatum*.

Geaster subiculosum, Cke. & Mass.

Gregarium, late obovatum ($\frac{1}{2}$ - $\frac{3}{4}$ in. diam.), subiculo albo, effuso, xylostromoideo, enatum. Peridio exteriori furfuraceo, lignicolori, multifido, laciniis plurimis acutis rigidulis demum reflexis fissurato, peridio interiori obscuriori, sessili, globoso, lævi, ore leviter umbonato, fimbriato. Capillitio sporisque atro-umbrino, filamentis flexuosis, simplicibus, variabilis, attenuatis, sporis lævibus, globosis, $4\ \mu$ diam.

On rotten wood. Trinity Bay.

Allied to *G. mirabile* and *G. lignicola* in the habit of growing on wood, seated upon a dense subiculum.

Phoma purpurea, Cooke & Mass.

Amphigena. Maculis orbicularibus, purpureis. Peritheciis semi-immersis, atris, nitidis, primo tectis, gregariis, subcircinatis. Sporulis minutis, ellipticis, hyalinis, $4 \times 2\ \mu$.

On coriaceous leaves. Brisbane. (Bailey, 504.)

Ascochyta apiospora, Cke. & Mass.

Maculis epiphyllis, orbiculari-difformibus, fuscis, zona purpurea cinctis; peritheciis minutis, innatis, ostiolo parvulo pertusis, sporulis pyriformibus, inæqualiter didymis, hyalino-fuscis, loculo superiori subgloboso, amplo, loculo inferiori minuto, papillæformi, $12 \times 12 \mu$.

On leaves of myrtle. Johnstone River. (Bailey, 499.)

Ascochyta brunnea, Cke. & Mass.

Maculis amphigenis, orbiculari-difformibus, pallide fuscis, ochraceisve, linea obscuriori elevato cinctis; peritheciis minutis, punctiformibus, atris, innatis, demum emergentibus. Sporulis arcte ellipticis, uniseptatis, hyalinis ($12 \times 4 \mu$) basidiis æqualibus.

On leaflets of tree unknown (*Sapindaceæ*?). Brisbane. (Bailey, 506.)

Erysiphe vitigera, Cke. & Mass.

Hypophylla, mycelio floccoso, persistente, peritheciis gregariis, minutissimis (4 mm. diam.), sphæroideis; appendicibus obsoletis vel cum mycelio intertextis, ascis pyriformibus (4 in singulo perithecio), $50 \times 30 \mu$, bisporis. Sporidiis ellipticis, hyalinis, $18 \times 9 \mu$.

On leaves of grape vine. Near Melbourne. (Mueller.)

Allied to *E. lamprocarpa*, but apparently distinct from all the bisporous species. We have seen the floccose mycelium before, but without perithecia. Hitherto we have not been successful in detecting or identifying the conidia. Destructive to the vines in Australia, but there is no evidence on which to connect it with *Oidium Tuckeri*, but, on the contrary, the floccose mycelium is much more woolly, and commonly sterile, at least in so far as we have seen specimens. Leaves and twigs sent to us from Australia last year, with a thick cottony white mycelium, but without fruit of any kind, was probably the same species. It has every appearance of being a dangerous pest. The methods adopted here of sulphuring *Oidium Tuckeri* should be tried perseveringly, and the disease stamped out at once, if possible.

Agaricus (Pleurotus) clitocyboides, Cke. & Mass.

Pileo convexo-depresso, tenui, glabro, lævi, ochraceo-pallido, demum rufescente, margine membranaceo, leniter striatulo. Stipite ascendente, curvulo, subæquali, solido, utrinque subincrassato, pallidiore, deorsum albobloccoso, disco carnosio. Lamellis confertis, tenuibus, longe decurrentibus, vix latis albis. Sporis ellipticis, $5 \times 2 \mu$.

On old fern logs. Gipps Land. (Tisdall, 125.)

Pileus 2 in. Stem $1\frac{1}{2}$ -2 in. long, 2-3 lines thick.

Agaricus (Lepiota) stenophyllus, Cke. & Mass.

Pileo carnosio, molli, e hæmispherico applanato, ente fusco, in squamas adpressas diffracto; margine incurvo. Stipite procero, bulboso, fistuloso, glabro, albido, annulo superno deciduo. Lamellis linearibus, liberis, perangustis, albis. Sporis ellipticis, $12 \times 7-8$.

On the ground. Endeavour River, Queensland.

Pileus $1\frac{1}{2}$ inch. Stem 5 in. long, $\frac{1}{4}$ inch thick above, twice as thick at the base.

Agaricus (Crepidotus) phaeton, Cke. & Mass.

Pileo submembranaceo, plano, postice depresso, lateritio, margine tenui, flexuoso, striatulo; stipite laterali, elongato, subæquali, concolore, ad basem incrassatam albovillosa. Lamellis linearibus, subdecurrentibus, cinnamomeis. Sporis ellipticis, $8 \times 4 \mu$.

On the ground. Government Domain, near Melbourne.

Pileus $1\frac{1}{2}$ -2 in. diam. Stem 2 inches long, 2 lines thick.

Agaricus (Entoloma) flavidorufus, Cke. & Mass.

Cæspitosus. Pileo convexo, vel sub-campanulato, glabro, virgato, pallido flavido, margine lætiore, stipite deorsum incrassato, fistuloso, rufo-brunneo, ad basin albo-flocculoso. Lamellis ventricosis, dente adnexis, carneis. Sporis globoso-angulatis, verrucosis.

On black loam. Gipps Land. (Tisdall, 113.)

Pileus $\frac{1}{2}$ to $1\frac{1}{2}$ inches. Stem 2 inches long, 2 lines thick.

Uredo spyridii, Cke. & Mass.

Hypophyllis. Soris sparsis, flavescentibus, pulverulentibus. Sporis subglobosis, pallide flavidis, asperulis, $20-25 \mu$.

On leaves of *Spyridium parvifolia*. Australia. (Watt, No. 45.)

Uredo rhagodiæ, Cke. & Mass.

Hypophyllis. Soris sparsis, bullatis, diu tectis, demum laceratis, fuscis, epidermide cinctis. Sporis globoso-ovatis, lævibus, flavescentibus, $20 \times 15 \mu$.

On leaves of *Rhagodia Billardieri*. Australia. (Watt., 62).

Hymenochæte innatum, Cke. & Mass.

Resupinatum, tenue, innatum, extus cervinum, intus lateritium, margine indeterminate. Setis parvulis, gracilis, $15-20 \times 2 \mu$. Sporis globosis, 4μ .

On wood. Daintree River, Australia.

Innate, scarcely distinct from the subjacent matrix, which is discoloured by the bright brown mycelium.

DIPLODERMA, Link. Diss. 11., 44.

Peridium duplex, exterius fibroso-lignescens, clausum, interius discretum, cartilagineum, nucleo centrali lignoso; capillitio radiato.

Differs from *Mesophellia*, Berk., in the distinct double peridium. The hard central nucleus is connected with the inner wall of the inner peridium by the radiating threads of the capillitium.

Diploderma glaucum, Cke. & Mass.

Subglobosum, glauco-cinereum (1 unc. diam.), peridio exteriori fragili, mox secedente. Capillitio simplici, contorto, intertexto. Sporis glaucis, ellipticis, glabris ($10 \times 5 \mu$).

Amongst sand. Scamander River, Australia. (Wintle.)

Outer peridium grey, fibrous, the fibres agglutinated together, studded on the outside with particles of sand, very brittle when dry, and soon falling away. Inner peridium thin, yellowish, brittle when dry, smooth, quite free from the outer peridium. The centre occupied by a hard, compact nucleus, half the diameter of the peridium, composed of branched hyphæ. Threads of capillitium narrower than the spores, radiating from the central nucleus to the wall of peridium.

Diploderma suberosum, *Cke. & Mass.*

Depresso-globosum ($1\frac{1}{2}$ unc. diam.), deorsum in stipitem brevem attenuatum. Peridio exteriori suberoso, persistente, ochraceo; peridio interiori nigrescente; capillitio simplici, recto, radiato, hyalino. Sporibus ochraceis, globosis, glabris (3-4 μ diam.).

On the ground. Brisbane.

Outer peridium externally fibroso-villose, inner peridium cartilaginous, blackish, almost horny when cut, but thin. Central nucleus smaller than in *D. glaucum*, at first connected with the peridium by the radiating, variable threads of the capillitium, but soon becoming free.

CASTOREUM, *C. & M.*

Peridium duplex, exterius fibrosum, deorsum in stipitem fibrosum radicans productum, interius subcartilagineum. Capillitio arachnoideo, nec radiato, vagi, peridio interiori undique adnati; floccis simplicibus, tenuibus, intertextis.

Castoreum radicans, *Cke. & Mass.*

Fasciculatum, subglobosum (1-2 unc.) 2-9 in stipitem fibrosum coalitum. Peridio externo fusco, persistente, coriaceo; peridio interno subgelatinoso, demum corneo. Capillitio tenuissimo, intertexto, hyalino, sporibus subochraceis, fusiformibus, inæqualiter verrucosis ($12 \times 5-6 \mu$).

On the ground, near St. George's Bay, Tasmania. (G. Wintle.) Eaten by kangaroos and bandicoots.

The outer peridium is leathery and tough, running downward and becoming confluent in a tough rooting stem. The texture of the outer peridium, the presence of a distinct inner peridium, more pronounced capillitium, paler colour, and large fusiform spores distinguish this from *Scleroderma*.

Peziza tenacella, *Phillips.*

Sessile, cupulate, then plane or convex, glabrous, umber-brown; margin entire, at length repand; flesh firm, thin; asci cylindrical; sporidia 8, elliptic, binucleate, $.01 \times .005-8$ mm.; paraphyses slender, slightly thickened at the brown curved apices.

On the ground. Melbourne, Australia. (M. F. Reader.)

Cups from $\frac{1}{4}$ to $\frac{5}{8}$ of an inch broad. The margin becomes repand, and the disc is depressed in the centre. The texture is toughish.

Asterina intensa, *Cke. & Mass.*

Amphigena. Maculis atris, orbicularibus. Peritheciis applanatis, minutis, densissime congestis ($\frac{1}{8}$ mm. diam.), margine fimbriato. Ascis ovatis, octosporis. Sporidiis ellipticis, obtusis, uniseptatis, fuscis ($15 \times 8 \mu$).

On leaves of *Pisonia*. New Zealand. (Kirk, 219.)

Asterina effusa, *Cke. & Mass.*

Mycelio effuso, atro, pelliculoso. Peritheciis sparsis vel congestis, hemisphaericis, minutis, nigris. Ascis obovatis, octosporis; sporidiis subpyriformibus, uniseptatis, loculo superiori subgloboso, altero minori, fuscis ($10 \times 5-6 \mu$).

On leaves of *Pittosporum eugeniioides*. New Zealand. (Kirk, 226.)

Xylaria (xyloglossa) ovispora, *Cke. & Mass.*

Stromate coriaceo, atro, stipitato, erecto, sursum furcato palmatoque, deorsum in stipitem glabram attenuato. Ascis cylindraccis. Sporidiis subglobosis, fuscis, $6 \times 5 \mu$.

On stumps. Daintree River, Australia.

Differing in the form of the sporidia from all allied species.

Xylaria (xyloglossa) cinnabarina, *Cke. & Mass.*

Stromate suberoso, subgloboso, corrugato vel depresso, brunneo, sub cuticulâ tenui cinnabarino, intus albo, stipite obsoleto. Peritheciis magnis, prominulis. Ascis cylindraccis. Sporidiis lanceolatis, fuscis, $10-12 \times 3-4 \mu$.

On wood. Daintree River, Australia.

The majority of the above communicated by Baron F. von Mueller, K.C.M.G.

FLORA OF LEICESTERSHIRE.*

Only a few years ago, and a County Flora was considered moderately complete, if, in addition to the Flowering Plants, it included Ferns and their immediate allies. Now it is beginning to be recognized that a local Flora is by no means complete unless an effort is made to include as many of the Cryptogams as possible. This is always one of the most difficult parts of the volume, and the most incomplete, because the workers amongst the Cryptogams are comparatively few, and the lists scanty. Nevertheless, this "Flora of Leicestershire" presents a most respectable appearance, in its latter portion, for with the Flowering Plants we have no concern. To the 188 pages of Phanerogams, we recognize the addition of 148 pages of Cryptogams. The Algæ, contributed by

* "The Flora of Leicestershire, including the Cryptogams," issued by the Leicester Literary and Philosophical Society. Compiled by F. T. Mott, Thos. Carter, E. F. Cooper, J. E. M. Finch, and C. W. Cooper. So, 372 pp., with maps. London: Williams and Norgate, 1887.

Mr. F. Bates, and the Desmidiæ, by Mr. J. Roy, appear to us the most complete and satisfactory, in this portion of the work; and here we are glad to observe a few species not before recorded in Britain, amongst which are *Edogonium alandicum*, Wittr.; *Edogonium Bernardense*, Bates; *Microthamnion Kutzingianum*, Nag.; *Anabaena nitellicola*, Bates; *Sphærozyga Cookeana*, Bates; *Cylindrospermum majus*, Kutz; *Oscillaria chalybea*, Mert. As to the Fungi, we turn with some regret, because, although a respectable list, it might easily have been rendered much more complete if the pages of *Grevillea* had been more carefully consulted. Take, as an illustration, the *Sphærospideæ*, of which a list of the British species was published in this journal last year; the total enumerated is six species, and all the following, with Leicestershire localities, in *Grevillea* omitted.

- 164. *Dendrophoma pruinosa*, Fries. Twycross.
- 180. *Vermicularia dematium*, Fr. Twycross.
- 285. *Stagonospora turgida*, B. & Br. Twycross.
- 350. *Cytispora pini*, Desm. Twycross.
- 376. *Phyllosticta vulgaris*, Desm. Twycross.
- 412. *Phyllosticta argentinæ*, Desm. Twycross.
- 456. *Asteroma rosæ*, Lib. Twycross.
- 458. *Darluca filum*, Cast. Twycross.
- 469. *Septoria Badhami*, B. & Br. Twycross.
- 475. *Septoria hederæ*, Desm. East Bergholt.
- 493. *Septoria epilobii*, West. Twycross.
- 535. *Septoria polygonorum*, Desm. Twycross.
- 556. *Polystigmina rubra*, Desm. East Bergholt.
- 557. *Leptothyrium periclymeni*, Desm. Twycross.
- 567. *Piggotia astroidea*, B. & Br. Twycross.
- 574. *Leptostroma filicinum*, Fr. Twycross.
- 581. *Leptostromella juncinum*, Fr. Leicester.
- 591. *Psilospora quercus*, Rabh. Leicester.
- 613. *Glæosporium fragariæ*, Lib. Twycross.
- 615. *Glæosporium paradoxum*, Not. Twycross.
- 647. *Melanconium magnum*, Grev. Gopsall.
- 651. *Melanconium betulinum*, S. & K. Twycross.
- 653. *Cryptomela caricis*, Corda. Orton.
- 659. *Stilbospora macrosperma*, P. Bergholt.
- 665. *Coryneum pulvinatum*, Kunze. Twycross.
- 674. *Steganosporium pyriforme*, Hoff. Twycross.

And this list might have been doubled readily by the work of a day or two in the neighbourhood of Leicester. Again, could any mycologist be induced to believe that only one species of *Puccinia*, one *Coleosporium*, not one *Uredo* or *Ustilago*, not even *U. segetum*, not a single species of *Uromyces*, and only six species of *Æcidium*, are known in Leicestershire? Surely the published sets of Bloxam's British Fungi (dried specimens) contain more than this.

Next, we come to the *Hyphomycetes*, altogether 22 species, instead of at least ten times that number, not even *Brachysporium Bloxami*, Cooke, *Grevillea*, xii., p. 36, or the beautiful *Triposporium elegans*, Corda, first collected in Britain by Bloxam at Twycross. All the *Sphæriacei*, or rather all the *Pyrenomycetes*, are represented by 33 species, not even including *Diaporthe acus*, Bloxam. The larger fungi (*Hymenomycetes*) present a better list, but even here it is a misfortune to miss *Hydnum Weiumanni*, Fr., for which Bristol and Twycross were the only known British localities for twenty years.

Notwithstanding these drawbacks, we must hail the volume with pleasure, as containing the commencement of a catalogue of the Fungi of Leicestershire. It is clearly printed, and will be a welcome contribution to the natural history of the county. We have called attention to the omissions in the hope that a new edition will exhibit an improvement, and that the good people of Leicester will not accept this as a complete Cryptogamic Flora of their county, but rather as a first instalment, which will soon be considerably augmented.

BRITISH SPHÆROPSIDEÆ.

We have just had our attention called to an inexplicable printer's error, by which in our list all the numbers between 596 (on p. 108 of Vol. xiv.) and number 606 (on p. 123, Vol. xiv.) have been omitted. We have endeavoured to supply this deficiency, but, as our notes are all destroyed, there are one or two numbers not accounted for.

- 597. **Dinemasporium hispidulum**, Schrad. *Sacc. Syll.* 3619.
On wood. Epping, Kew, Shere.
- 598. **Dinemasporium herbarum**, Cooke. *Sacc. Syll.* 3619.*
On nettles. Highgate.
- 599. **Dinemasporium fimeti**, P. & Pl. *Sacc. Syll.* 3627.
On rabbits' dung. King's Lynn.

GEN. 7. **DISCELLA**, B. & Br. *Sacc. Syll.* III., 687.

Perithecia discoid or patellate, covered, often imperfect. Sporules oblong or ovate, uniseptate, hyaline.

- 600. **Discella carbonacea**, Fries. *Sacc. Syll.* 3631.
On willows. Eastbourne.
- 601. **Discella abnormis**, B. & Br. *Sacc. Syll.* 3634.
On elder. Batheaston.

GEN. 8. **EXCIPULARIA**, *Sacc. Syll.* III., 689.

Perithecia sub-cupulate, setose. Sporules oblong, multiseptate, hyaline, then brownish.

602. **Excipularia fusispora**, *B. & Br. Sacc. Syll.* 3638.

On *Clematis*. Batheaston.

GEN. 9. **PILIDIUM**, *Kunze. Sacc. Syll.* III., 689.

Perithecia discoid, unequal, smooth, torn into teeth at the margin. Sporules oblong or fusoid, septate, hyaline.

603. **Pilidium fuliginosum**, *Fr. Sacc. Syll.* 3639.

On willow.

GEN. 10. **PLEUROSPOPOPSIS**, *Ærst. Sacc. Syll.* III., 643.

Perithecia brightly coloured at first, subsuperficial, papyraceous, operculate. Sporules ovoid, continuous, yellow.

604. **Pleurospopopsis strobilina**, *A. & S. Sacc. Syll.* 3655.

On fir cones. Edinburgh.

To these also must be added the following recent additions to the British list.

8*. **Phoma cryptica**, *Sacc. Syll.* 403.

On *Lonicera*. Groombridge, Kent.

28*. **Phoma enteroleuca**, *Sacc. Syll.* 442.

On capsules of *Syringa*. Kew Gardens.

30*. **Phoma vepris**, *Sacc. Syll.* 444.

On *Rubus*. Oxford.

44*. **Phoma callunæ**, *Karst. Sacc. Syll.* 500.

On *Calluna vulgaris*. Aberdeen.

69*. **Phoma mororum**, *Sacc. Syll.* 565.

On *Morus alba*. Kew.

74*. **Phoma glyptica**, *C. & M. Grev. xv.*, 107.

On *Salix*. Tunbridge Wells.

90*. **Phoma quercus**, *Sacc. Syll.* 640.

On oak leaves. Oxford.

126*. **Phoma Berkeleyi**, *Sacc. Syll.* 796.

On *Urtica* and *Sambucus*. Aberdeen.

113*. **Phoma subcomplanata**, *C. & M. Grev. xv.*, 107.

On *Heracleum*. Tunbridge Wells.

130*. **Phoma macrocarpa**, *Trail. Scot. Nat.*, July, 1886.

On *Mercurialis*. Scotland.

131*. **Phoma melæna**, *Fr. Sacc. Syll.* 804.

On *Astragalus glycyphyllus*. St. Cyrus, N.B.

136*. **Phoma sarmentella**, *Sacc. Syll.* 827.

On hop bine. Isleworth.

140a. **Phoma galacis**, *Cooke. Grev. xiv.*, 90.

On leaves of *Galax aphylla*. Kew.

- 140b. **Phoma tussilaginis**, C. & M. *Grev.* xv., 108.
On leaves of *Tussilago*. Hereford.
- 140c. **Phoma podophylli**, Cooke. *Grev.* xv., 108.
On leaves of *Podophyllum*. Kew.
- 146*. **Phoma deusta**, Fekl. *Sacc. Syll.* 925.
On *Rhinanthus*. Aberdeen.
- 148*. **Phoma iridis**, C. & M. *Grev.* xv., 108.
On *Iris* leaves. Somerton; Breinton; Kew.
- 152*. **Phoma neglecta**, Desm. *Sacc. Syll.* 982.
On *Juncus effusus*. Aberdeen.
- 159*. **Aposphæria pulviscula**, Sacc. *Syll.* 1052.
On willow wood. Oxford.
- 164*. **Dendrophoma phyllogena**, Trail. *Scot. Nat.*, 1887, p. 87.
On holly leaves. Aberdeen.
- 166*. **Coniothyrium hellebori**, C. & M. *Grev.* xv., 108.
On leaves of *H. niger*. Kew.
Coniothyrium Fuckelii, Sacc. *Syll.* 1724.
On gooseberry. Frant.
Coniothyrium inconspicuum, Cooke. *Grev.* xv.
On *Gyneryum*. Claygate.
Phlyctæna vagabunda, Desm. *Sacc. Syll.* 3226.
On herbs. Twycross, Epping, &c.
Phlyctæna phomatella, Sacc. *Syll.* 3231.
On elm twigs. Hampstead.
Phlyctæna Johnstonii, B. & Br. *Sacc. Syll.* 3236.
On ragwort. Berwick.
- 197*. **Diplodia ulicis**, S. & S. *Sacc. Syll.* 1869.
On *Ulex*. Frant, Sussex.
- 240*. **Diplodia rhododendri**, Bell. *Sacc. Syll.* 2027.
On *Rhododendron*. Aberdeen.
- 260*. **Diplodia ascochytoïdes**, Sacc. *Syll.* 2274.
On *Lavatera thuringiaca*. Kew.
- 299a. **Stagonospora aquatica**, Sacc. *Syll.* 2470.
var. **sexseptata**, Trail.
On *Scirpus lucustris*. Aberdeen.
- 299b. **Stagonospora equisetina**, Trail. *Scot. Nat.* 1887, p. 88.
On *Equisetum palustre*. Corbie Loch, N.B.
- 398*. **Phyllosticta ulmi**, West. *Sacc. Syll.* 174.
On elm leaves. Whitfield.
- 421*. **Phyllosticta pentestemonis**, Cooke. *Grev.* xiv., 90
On *Pentestemon grandiflorus*. Kew.
- 424*. **Phyllosticta teucrii**, Sacc. & Sp. *Sacc. Syll.* 271.
On *Teucrium scorodonia*. Scotland.
- 425*. **Phyllosticta galeopsidis**, Sacc. *Syll.* 275.
On *Galeopsis tetrahit*. Aberdeen.

- Ascochyta astrantiæ**, Roum. Sacc. Syll. 2212.
On *Astrantia*. Kew.
- Ascochyta aquilegiæ**, Roum. Sacc. Syll. 2191.
On *Aquilegia vulgaris*. Kew.
- Ascochyta lathyri**, Trail. Scot. Nat. 1887, p. 87.
On *Lathyrus sylvestris*. Montrose.
- Ascochyta viciæ**, Trail. Scot. Nat. 1887, p. 87.
On pods of *Vicia sepium*. Dunottar.
- Ascochyta microspora**, Trail. Scot. Nat. 1887, p. 87.
On *Arctium*. St. Cyrus. On *Petasites*. Aberdeen.
- Ascochyta malvicola**, Sacc. Syll. 2210.
On *Malva sylvestris*. Aberdeen.
- Ascochyta primulæ**, Trail. Scot. Nat. 1887, p. 88.
On *Primula vulgaris*. Dunottar.
- Ascochyta plantaginis**, S. & S. Sacc. Syll. 2234.
On *Plantago major*. Aberdeen.
- Ascochyta graminicola**, Sacc. Syll. 2252.
var. **brachypodii**, Trail.
On *Brachypodium sylvaticum*. Dunottar.
var. **leptospora**, Trail.
On *Agropyrum repens* and *Psamma arenaria*. Aberdeen.
- 497*. **Septoria sinarum**, Spig. Sacc. Syll. 2802.
On *Dianthus barbatus*. Aberdeen.
- 498*. **Septoria lychnidis**, Desm. Sacc. Syll. 2804.
On *Lychnis diurna*. Dunottar.
- 524*. **Septoria prunellæ**, Trail. Scot. Nat. 1887, p. 88.
On *Prunella*. Near Ballater.
- 529*. **Septoria adoxæ**, Fekl. Sacc. Syll. 2945.
On *Adoxa*. Forbes.
- 532*. **Septoria cercosporoides**, Trail. Scot. Nat. 1887, p. 88.
On *Chrysanthemum*. Montrose.
- 547a. **Septoria affinis**, Sacc. Syll. 3054.
On oats and *Triticum repens*. Aberdeen.
- 547b. **Septoria alismatis**, Oud. Sacc. Syll. 3093.
On *Alisma plantago*. Kingcausie, N.B.
- 547c. **Septoria lineolata**, S. & Sp. Sacc. Syll. 3076.
On *Carex arenaria*. Aberdeen.
- 577*. **Sacidium epimedii**, Cke. Grer. xv., 110.
On *Epimedium alpinum*. Kew.
- 631*. **Cylindrosporium oxalidis**, Trail. Scot. Nat. 1887, p. 89.
On *Oxalis*. Aberdeen.
- 635*. **Cylindrosporium alismatearum**, Sacc. Syll. 3865.
On *Alisma plantago*. King's Lynn.
- 646*. **Marsonia melampyri**, Trail. Scot. Nat. 1887, p. 89.
On *Melampyrum pratense*. Near Ballater.
- 668*. **Coryneum comari**, Trail. Scot. Nat. 1887, p. 90.
On leaves of *Rotentilla comarum*. Aberdeen.

NEW BRITISH FUNGI.

BY M. C. COOKE.

*(Continued from p. 67.)***Panus farinaceus**, *Schum. Fr. Hym. Eur.* 490. var. **albido-tomentosum**, *Cke. & Mass.*

Pileus subcoriaceous, flexuous, pallid umber, densely clothed with a short whitish *velvety tomentum*, which seems to be persistent, but thinner and shorter towards the incurved margin, stem lateral, or without any distinct stem, but attached by a villous base; gills radiating, attenuated behind, lanceolate, honey-coloured, entire, rigid, scarcely crowded, mixed with shorter ones; spores sub-globose ($5\ \mu$ diam.).

On trunks. Epping.

Pileus about an inch broad, often in imbricated tufts. It is doubtful whether this is not a distinct species from the type described by Fries.

Panus patellaris, *Fr. Hym. Eur.* 490.

Resupinate, coriaceous, plane or cup-shaped, orbicular, externally pallid, *furfuraceous*, adnate by the scarcely porrect vertex, margin involute, gills concurrent, dingy ochre, somewhat crowded, entire. Spores oval ($6 \times 4\ \mu$).

On branches of cherry. Forres. (Rev. Dr. Keith.)

In some respects very similar to *P. ringens*, but differs in the distinctly mealy pileus, and the smooth, not striate, margin. Pileus $\frac{1}{2}$ inch or a little more.

Peniophora terrestris, *Mass.*

Pale grey, effused, forming velvety patches on the naked soil, with an indeterminate margin, substratum thin, interwoven, basidia clavate or pear-shaped, metuloids lanceolate, rough, hyaline ($85-89 \times 15-20\ \mu$). Spores oval, hyaline ($10 \times 6-7\ \mu$).

On naked soil. Queen's Cottage, Kew.

Forming grey velvety patches 1-2 inches in diameter.

Phoma glyptica, *Cke. & Mass.*

Subcuticular. Perithecia grouped in circles, surrounded by a more or less distinct line, sub-globose, the punctiform ostiola piercing the epidermis. Sporules oval, continuous, hyaline, on long sporophores ($4-5 \times 3\ \mu$).

On branches of *Salix*. Tunbridge Wells.

Externally, in habit and appearance, not distinguishable from *Valsa glyptica*, Berk. & Curr.

Phoma subcomplanata, *Cke. & Mass.*

Perithecia gregarious, soon becoming exposed and superficial, small, globose, then collapsed and cup-shaped, black ($\frac{1}{6}-\frac{1}{4}$ mm.). Sporules subglobose, continuous, hyaline, very numerous, minute ($3 \times 2\ \mu$).

On stems of *Heracleum*. Tunbridge Wells. (E. G. Baker.)

Resembling *P. complanata*, but much smaller, and sporules very minute.

Phoma tussilaginis, Cke. & Mass.

Epiphyllous. Perithecia at first covered, then hemispherical, black, pierced at the apex, gregarious on brown irregular spots, minute, punctiform. Sporules elliptical, colourless, continuous, $8-10 \times 5-6 \mu$.

On fading leaves of *Tussilago farfar*. Canal Bank, Hereford. Sept., 1885.

A most distinct and interesting species, not at all like the ordinary forms of *Phoma*, approaching *Asteromella*.

Phoma podophylli, Cooke.

Epiphyllous. Perithecia rather scattered, black, punctiform, seated on dead brown spots of decaying leaves, convex, rather prominent. Sporules narrowly elliptic, with a nucleus at each extremity ($10 \times 3 \mu$).

On fading leaves of *Podophyllum*. Kew.

Phoma Iridis, Cooke.

Perithecia scattered, punctiform, covered by the cuticle, convex, black. Sporules narrowly elliptical, with or without nuclei, obtuse at the ends, on short basidia ($7 \times 2 \mu$).

On leaves of *Iris fetidissima*. Somerton, Breinton, Kew.

Dendrophoma phyllogena, Trail. Scot. Nat., 1887, p. 87.

On pale spots. Perithecia numerous, subdermal, black, ellipsoid, subpapillate basidia fasciculate ($30-35 \mu$ long, 2μ thick at the base), hyaline, bearing alternate short branches, each tipped with a hyaline cylindrical conidium ($8-12 \times 1\frac{1}{2}-2 \mu$).

On holly leaves. Aberdeen.

Coniothyrium hellebori, Cke. & Mass.

On both surfaces. Spots orbicular, sooty brown, marked concentrically ($\frac{1}{2}$ in. diam.). Perithecia small, collected chiefly in the centre, for some time covered, papillate. Sporules oval, pale brown ($4.5 \times 2.3 \mu$).

On fading leaves of *Helleborus niger*. Kew.

Ascochyta microspora, Trail. Scot. Nat., 1887, p. 87.

Epiphyllous, spots nearly circular, black or dark brown, thickly dotted with globular perithecia (70μ diam.), which appear pale brown under the microscope; sporules uniseptate, subcylindrical, with rounded ends, straight or curved ($5-7 \times 1\frac{1}{2}-2 \mu$), hyaline.

On *Arctium lappa*. St. Cyrus.

On *Petasites* (sporules $6-8 \times 1\frac{1}{2}-2 \mu$). Aberdeen.

Ascochyta primulæ, Trail. Scot. Nat., 1887, p. 88.

Epiphyllous, spots like those of *Phyllosticta primulicola*, Desm. Perithecia scattered over the spots, depressed, globose, pale brown ($100-110 \mu$ diam.), papillate. Sporules uniseptate, hyaline, cylindrical, obtuse ($5-6 \times 2-2\frac{1}{2} \mu$).

On *Primula vulgaris*. Dunottar.

Ascochyta lathyri, *Trail. Scot. Nat.*, 1887, p. 87.

Spots ill-defined, tending to cover the entire leaf. Perithecia numerous, subglobose, depressed ($50-100\ \mu$ diam.). Sporules uniseptate, hyaline, cylindrical, with obtuse ends ($8-10 \times 2\frac{1}{2}\ \mu$).

On dead leaves of *Lathyrus sylvestris*. St. Cyrus, near Montrose.

Ascochyta viciæ, *Trail. Scot. Nat.*, 1887, p. 87.

Spots pale and withered, with a rufous border, irregularly rounded. Perithecia scattered over the spots. Sporules uniseptate, subcylindrical, obtuse, often slightly curved, granular, yellowish ($13-16 \times 2\frac{1}{2}-3\ \mu$).

On pods and leaves of *Vicia sepium*. Near Dunottar.

Ascochyta graminicola, *Sacc. Syll.* var. **brachypodii**, *Trail. Scot. Nat.*, 1887, p. 88.

Differs from the type in the slightly curved and stouter sporules, which measure $15-17 \times 5\ \mu$, and are slightly fusoid, with blunt ends. Perithecia not crowded, though arranged in groups.

On dead leaves of *Brachypodium*. Near Dunottar.

var. **leptospora**, *Trail. Scot. Nat.*, 1887, p. 88.

Agrees with var. *Holci*. (Sacc.) in the form of the sporules, but the latter are rather smaller ($12-14 \times 2\frac{1}{2}-3\ \mu$) and are hyaline, without guttæ.

On dying leaves of *Agropyrum repens* and of *Psamma arenaria*. Aberdeen.

Steganospora aquatica, *Sacc. Syll.* var. **sex-septata**, *Trail. Scot. Nat.*, 1887, p. 88.

Agrees well with *S. aquatica* in all respects except the slightly larger perithecia ($150\ \mu$ diam.) and in the sporules, which are slightly more slender ($32-35 \times 5-6\ \mu$) and have six septa instead of three.

On dead stems of *Scirpus lacustris*. Near Aberdeen.

Steganospora equisetina, *Trail. Scot. Nat.*, 1887, p. 88.

Perithecia innate, scattered, globose ($80\ \mu$ diam.), brown. Sporules straight, fusoid-cylindrical ($18-24 \times 4-5\ \mu$), subacute, 6-8 guttulate, faintly 5-7 septate, hyaline.

On dead stems of *Equisetum palustre*. Corbie Loch.

Septoria lychnidis, *Desm. Sacc. Syll.* var. **pusilla**, *Trail. Scot. Nat.*, 1887, p. 89.

Differs from the type in the sporules, which have only from 1 to 4 septa, and measure $35-50 \times 1\frac{1}{2}-2\ \mu$.

On living leaves of *Lychnis diurna*. Near Aberdeen.

Septoria cercosporoides, *Trail. Scot. Nat.*, 1887, p. 89.

Spots irregular, ill-defined, black, most conspicuous on the upper surface of the leaves. Perithecia in groups, ellipsoid ($90 \times 70\ \mu$), rather pale brown. Sporules clavulate, with one end blunt, thus resembling the conidia of *Cercospora* ($50-60 \times 2\ \mu$), nearly hyaline, 6-8 septate.

On *Chrysanthemum leucanthemum*. Montrose.

Septoria prunellæ, *Trail. Scot. Nat.*, 1887, p. 89.

Spots irregular, but bounded by larger veins of leaves. Perithecia numerous, innate. Sporules nearly hyaline, filiform ($45 \times 1 \mu$), multiseptate.

On living leaves of *Prunella vulgaris*. Near Ballater.

Sacidium epimedii, *Cooke*.

Perithecia scattered, on the under surface, innato-convex, then open above, very thin. Sporules subglobose, continuous, hyaline, about 4μ diam.

On fading leaves of *Epimedium alpinum*. Kew.

Cylindrosporium oxalidis, *Trail. Scot. Nat.*, 1887, p. 89.

Spots on leaflets brown, dry, pale-margined, round (1-3 mm. diam.) pustules scattered, subdermal, with a wide pore for escape of the sporules, which are filiform, slightly tapering to the ends, curved ($20-25 \times 1 \mu$), hyaline.

On *Oxalis acetosella*. Near Aberdeen.

Marsonia melampyri, *Trail. Scot. Nat.*, 1887, p. 89.

Spots on leaves undefined, dark, becoming nearly black, pustules scattered on the spots or in patches, translucent; sporules hyaline, oblong-ellipsoid, slightly curved, scarcely constricted at the septum ($12-20 \times 3-3\frac{1}{2} \mu$), intermixed with chains of hyaline cells ($3-4\frac{1}{2} \times \frac{1}{2} \mu$).

On *Melampyrum pratense*. Near Ballater.

Marsonia potentillæ (*Desm.*), *Sacc. Syll.* var. **tormentillæ**, *Trail. Scot. Nat.*, 1887, p. 89.

Differs from the type chiefly in the sporules, which measure $12-16 \times 3-4 \mu$.

On *Potentilla tormentilla*. Near Aberdeen.

On *Potentilla anserina* ($14-20 \times 4-5 \mu$). Near Montrose.

On *Potentilla comarum* ($18-21 \times 3-4 \mu$). Near Aberdeen.

Coryneum comari, *Trail. Scot. Nat.*, 1887, p. 90.

Pustules grouped on ill-defined darker spots on the leaves, circular ($50-60 \mu$), with conspicuous pore; sporules honey-yellow, darkening to pale brown, straight, broadly fusiform ($25-30 \times 4-5 \mu$), triseptate.

On *Potentilla comarum*. Near Aberdeen.

Xylosphæria (zignoia) dealbata, *Cke*.

Perithecia on bleached spots, immersed in the wood, then semi-erumpent, conical, black (3 mm. diam.), pierced at the apex. Asci subcylindrical. Sporidia eight, narrowly elliptical, continuous, hyaline ($7 \times 4 \mu$).

On decorticated branches. Frant, Sussex. (E. G. Baker.)

Sphæria (phomatospora) ribesia, *Cke. & Mass.*

Perithecia gregarious, subcuticular, globose, black, papillate, at first covered, erumpent, at length with the ostiolum and upper portion exposed. Asci clavate or subcylindrical; sporidia narrowly elliptical, continuous, with two nuclei, hyaline ($10 \times 4 \mu$).

On twigs of *Ribes grossularia*. Battle Abbey. (E. G. Baker.)

Sphærella hieracii, *Cke. & Mass.*

Perithecia scattered over the upper surface of faded leaves, punctiform, subconical, immersed at the base. Asci clavate. Sporidia uniseriate, or rarely in part biseriate, elliptically lanceolate, obtuse at the ends, uniseptate, at first with a nucleus in each cell, hyaline, not constricted ($20 \times 4 \mu$).

On dying leaves of *Hieracium pilosella*. Tunbridge Wells. (E. G. Baker.)

TWO FUNGI FROM GABOON.

Coniothyrium aroideum, *C. & Mass.*

Amphigenum. Peritheciis sparsis, minutis, punctiformibus, prominulis, atris. Sporulis ovalibus, fuscis ($4 \times 3 \mu$).

On leaves of *Culcasia scandens*. Gaboon, W. Africa. (E. Simmonds.)

Asteromella gabonensis, *C. & Mass.*

Epiphylla. Maculis fumosis, orbicularibus vel confluentibus. Peritheciis gregariis, minutis, atris, hæmisphæricis, membranaceis. Sporulis ovalibus, continuis, hyalinis ($6 \times 4 \mu$).

On fading herbaceous leaves. Gaboon, W. Africa.

THE HYMENOMYCETES OF EUROPE.*

This thin volume by M. Patouillard may be supposed to represent a kind of introduction to his "Tabulæ Analyticæ Fungorum," and, as such, will doubtless prove acceptable to those who require general elementary information; otherwise, as an independent work, it possesses little value. Sixty-seven pages of large type cannot be supposed to exhaust the anatomy of the Hymenomycetes, and we do not recognize any effort to do so, since we fail to discover anything new, either in matter or manner, to give any character to what is simply a *résumé* of what is pretty generally known. This is followed by about as much more letter-press devoted to classification, in which we detect more novelty, without any increase of satisfaction. Nowadays a book on Fungi is supposed, of necessity, to contain a batch of new genera, brought into the world prematurely, and doomed to premature death, like rickety children, while scarce a tear will be shed over their remains. When this mania for new genera subsides a very small percentage of the creations will perhaps survive; the rest will serve to entertain and employ future mycologists in the

* "Les Hyménomycètes d'Europe. Anatomie générale et classification des Champignons supérieurs," par N. Patouillard. So., pp. 162, plates 4. Paris (Klincksieck), 1887.

preparation of interminable synonymies. Children in all countries, and both sexes, are fond of playing with dolls ; it is a harmless amusement, and keeps them from further mischief. There is not a little analogy between those who amuse themselves with the wholesale dressing up of new genera, and the children who amuse themselves with dolls.

NEW SPECIES OF RAVENELIA.

Ravenelia verrucosa, Cke. & Ellis.

Hypophylla. Uredosporis globosis, asperulis, luteis ($16\ \mu$). Teleutosporis in glomerulos hæmisphæricos congestis ($80\ \mu$). Glomerulis (sporis 20) stipitatis, cum lobulos (circa 8) hyalinos circumdatis. Telentosporis cuneatis, ad apicem asperulis, atrofuscis, ($20\ \mu$ diam.).

On leaves of *Lecania*, sp. ? Mexico. (J. B. Ellis).

It differs from *R. stictica* in not being sessile, in the hyaline lobules being larger and more conspicuous, and the warts smaller. This is the only species with which it could be confounded, and from this it seems to be distinct.

MUSCOLOGIA GALLICA.*

This work, which has now reached its fifth part, is proposed to be completed in about ten or twelve parts, each part containing 32 pages of letterpress and eight or ten plates. The plates remind us of those in Wilson's "Bryologia," except that they are not so fine and distinct ; in fact, there is all the difference between plate-printing and lithography. Nevertheless, the work is likely to prove a most useful one, and we cannot help wishing that there was as much prospect of our own "Moss Flora" coming so soon to a termination as the present work. Of the letterpress, we must confess ourselves incompetent to pronounce a critical opinion, since "mosses" have never been our "hobby ;" but we have been informed by others, on whom we rely, that this portion of the work is satisfactorily done. When complete it will form a good, imposing volume, and we doubt not will be found very valuable to the Bryological students of France, and be to them what Wilson's has for many years been to us. The last part or two has been rather tardy, since the work commenced in 1884, and its author should be urged to a quicker pace. It surely cannot be necessary to spend six or seven years in passing a work of this kind through the press, which will be the case without greater expedition is used.

* "Muscologia Gallica, Descriptions et Figures des Mousses de France," par T. Husnot. Parts 1 to 5. Roy 8vo., with plates. Paris (Savy), 1886-1887.

SOME NEW BRITISH DISCOMYCETES.

By W. PHILLIPS, F.L.S.

Mollisia (Niptera) Tamaricis (Roumg.).

Cups most generally caespitose, hemispherical, then expanded, bent and contorted by mutual compression, fuscous, margin growing white, furfuraceous, hymenium greyish-brown in the centre, sometimes tinged with a yellowish somewhat olivaceous colour, glabrous, asci sub-fusiform; sporidia 8, hyaline, terete, sub-fusiform, sometimes curved, $7-8 \times 2-3 \mu$. Paraphyses somewhat thickened at the apices, often branched.

Peziza Tamaricis, Roumg. Fung. Gall. Exs. 263. *Pyrenopeziza Tamaricis* (Roum.), Sacc. Mich. ii., p. 536. *Mollisia Myricarice*, Bres. Revue Myc. Vol. iv., p. 212 and 221. Roumg. Fung. Gal. No. 2278. *Mollisia Tamaricis* (Roum.), Bresad. Fung. Triden. fasc. iii., p. 42, t. xlv., f. 2.

On Tamarisk. Gopsall! (Rev. A. Bloxam.)

Cups $\frac{1}{2}$ to 1 line broad. Asci $45-55 \times 6-8 \mu$.

Mollisia (Pyrenop) lignicola, n.s.

Gregarious or scattered, sessile, at first globose, at length somewhat expanded, externally scabrous, and vertically rugose, brown or blackish-brown, when dry black; margin sub-fimbriate from the slightly unequally elongated cells; hymenium pallid; asci cylindraneo-clavate; sporidia 8, cylindrical or fusiform, obtuse, straight or curved, $5-8 \times 1.5-2 \mu$. Paraphyses indistinct.

On old worked wood (on an old gate). Bagley Wood, Berkshire (1821)! (Mr. Baxter.)

Cups $\frac{1}{4}-\frac{1}{2}$ a line broad; when dry collapsed, but not plane even when moist. Asci $35 \times 4 \mu$; sporidia biseriate. The marginal cells have the form of short septate blunt hairs when highly magnified.

Helotium badium, n.s.

Gregarious, erumpent, sessile, at first turbinate and slightly concave, at length plane; hymenium bay-brown, margin distinct, somewhat lighter, externally the same colour, glabrous; asci broadly clavate, rather abruptly narrowed at the base; sporidia 8, oblong-fusiform, or subclavate, $3-5$ guttulate, $20 \times 5 \mu$; paraphyses filiform, slender.

On dead twigs (willow?). Botanic Garden, Oxford, 1822! (Mr. Baxter in Herb. Kew.)

Cups $\frac{1}{2}-1$ line broad, margin entire and even. It has a general likeness to *H. ferrugineum*, but differs altogether in the fruit.

Encælia Bloxami, n.s.

Gregarious, often caespitose, shortly stipitate, cyathiform, coriaceous, blackish-brown, minutely verrucose, hymenium lurid-brown; margin slightly undulating; flesh dark purple-brown, asci clavate; sporidia 8, elliptic, $3-4 \times 2 \mu$; paraphyses filiform, adherent.

Fusiform, uniseptate, stylospores on slender filaments are abundantly intermixed with the asci and paraphyses, the summits rising a little above the surface of the hymenium.

Patellaria Bloxami, Berk. in Bloxam's collection in Kew Herb.

On dead wood. No habitat is given.

Cups about 1-4 lines broad. When dry the plant is black; the purple-brown colour of the interior is only seen in a microscopic section. The stylospores appear to arise from the sub-hymenial tissue, and are by no means an accidental addition, for they are present in all the cups I examined. They are similar bodies to those in *Peziza diplocarpa*, Currey, and cannot be explained as spores that have germinated. On the very young cups a few short hairs occur. The cells of the pseudo-pyrenchyma are about $7.5\ \mu$ across.

Dermatea Fagi, *n.s.*

Erumpent, the orbicular or elliptic groups 1-8 lines across, splitting the epidermis; cups plane or slightly convex, mostly immarginate, when moist orange yellow, when dry ferruginous yellow, pruinose, densely crowded on an evident stroma; stem when present stout, continuous with the stroma; asci broadly clavate; sporidia elliptic or oblongo-elliptic, filled with coarsely grained protoplasm, sometimes becoming muriform, $18-23 \times 9-12\ \mu$; paraphyses slenderly filiform, abundant.

Stylospores oblong-elliptic or elliptic, $10-20 \times 7-9\ \mu$; produced on the surface of the stroma in tufts between the cups on clavate sporophores.

On *Fagus sylvatica*. New Aberdeen! 1886.

The cups are $\frac{1}{4}-\frac{1}{2}$ a line broad. The conidia are produced in such a quantity that they form a pale layer on the stroma, visible by the aid of a pocket lens; I am not aware that they have been observed before in any other species.

Name, from the name of the tree on which it grows.

Cenangium seriatum, *Fr.*

Gregarious or caespitose, erumpent through narrow transverse cracks in the bark; cups globose-depressed, at first closed, at length opening, horny, black, glabrous, arising, in company with the Pycnidia and Spermatogonia, in a linear series from a thin black stroma; asei broadly clavate; sporidia 8, linear lanceolate, acute at the ends, straight or curved, pseudo-multiseptate, $55-85 \times 2-3\ \mu$.

Spermatogonia in the form of minute depressed tubercles, discharging by a pore the filiform-lanceolate spermatia, which are curved and about $15\ \mu$ long.

Pycnidia minute, slenderly conical, discharging by a minute apical pore the linear lanceolate stylospores, which are acute at the ends, curved, and about $30\ \mu$ long.

Cenangium seriatum, Fr. Sys. Myc. ii., p. 185; Duby. Bot. Gal. p. 736, No. 10. *Peziza truncatula*, Rebent. Ncom. p. 383. *Dermatea seriata*, Tul. Sel. Fung. Carp. Vol. iii., p. 160.

Exsic. Desmazieres Plant. Crypt. Gall. ed. 1, fasc. viii. (1829),

No. 384; Leveille in Moug. Stirp. Crypt., fasc. xv. (1860), No. 1479.

On *Betula alba*. Oxford! (Mr. Baxter.)

The transverse cracks in the bark expose the linear series ($\frac{1}{2}$ -1 in. long), composed of the three forms, the ascigerous cups being rarest. Tulasne gives the sporidia as $35-45 \times 3-4 \mu$; but in the Oxford specimen they are as given above. He says that long before the fruit can appear the linear series changes the natural colour of the white parchment-like bark to brown, and that underneath each sorus is a black linear ovate zone in the wood.

ALGÆ BRITANNICÆ RARIORES EXSICCATÆ.

FASCICULUS III.

By E. M. HOLMES.

51. *Anabaina variabilis*, Kütz.
Harwich, June, 1885, E. Batters.
52. *Bangia ceramicola*, Chaur.
Weymouth, October, 1884, E. M. Holmes.
53. *Callithamnion fruticulosum*, J. Ag., on *Chondrus crispus*.
Swanage, June, 1885, E. M. Holmes.
54. *Callithamnion tenuissimum*, Kütz.
Falmouth, June, 1884, E. M. Holmes.
55. *Cladophora expansa*, Kütz., on *Zostera* leaves.
Weymouth, September, 1884, E. M. Holmes.
56. *Cladophora flexuosa*, E. B.
Cley, Norfolk, August, 1886, E. Batters.
57. *Cladophora hirta*, Kütz.
Cley, Norfolk, August, 1886, E. Batters.
58. *Cladophora refracta*, Roth.
Weymouth, November, 1883, E. M. Holmes.
59. *Clathrocystis rosco-persicina*, Cohn.
Harwich, June, 1885, E. Batters.
60. *Codiolum gregarium*, A. Braun.
Lynnmouth, August, 1883, E. M. Holmes.
61. *Dasya venusta*, Harv.
Studland, near Swanage, October, 1886, E. M. Holmes.
62. *Ectocarpus cæspitulns*, J. Ag.
Newquay, June, 1884, E. M. Holmes.
63. *Ectocarpus irregularis*, Kütz.
Bognor, May, 1885, E. M. Holmes.

64. *Ectocarpus confervoides*, *Le Jol.*, f. *arcta*, Kütz., on *Zostera angustifolia*.
Weymouth, August, 1885, E. M. Holmes.
65. *Gigartina pistillata*, *Lamour*.
Tresco, Scilly. December, 1885, J. Robbins.
66. *Glœocapsa crepidinum*, *Thur.*
Near Rhyl, July, 1886, E. Batters.
67. *Lyngbya luteo-fusca*, *J. Ag.*
Berwick-on-Tweed, August, 1886, E. Batters.
68. *Lyngbya spectabilis*, *Thur.*, *ined.*, on *Rhizoclonium*.
Near Rhyl, July, 1886, E. Batters.
69. *Oscillaria capucina*, *Crm.*
Weymouth, October, 1886, E. M. Holmes.
70. *Pilinia rimosa*, *Kütz.*
Yarmouth, August, 1886, E. Batters.
71. *Polysiphonia turgidula*, *Cr.*
Falmouth, June, 1884, E. M. Holmes.
72. *Polysiphonia simulans*, *Harv.*
Swanage, June, 1885, E. M. Holmes.
73. *Spirulina oceanica*, *Cr.*
Weymouth, November, 1884, E. M. Holmes; and Cley,
Norfolk, August, 1886, E. Batters.
74. *Symploca fasciculata*, *Kütz.*, on *Fucus platycarpus*.
Weymouth, October, 1884, E. M. Holmes.
75. *Vaucheria Thureti*, *Woron.*
Weymouth, September, 1886, E. M. Holmes.

BRITISH PYRENO MYCETES.

A preliminary list of known species.

By G. MASSEE.

(Continued from p. 72.)

VALSA (continued).

SUB-GEN. 5. **Quaternaria**, *Tul.* Perithecia four, or only a few in a cluster.

V. quaternata, *P.* (*Persoonii*, *Tul.*), *Succ. Syll.* 425; *Hdbk.* 2482.

On beech, &c. Common.

V. dissepta, *Fr.*, *Succ. Syll.* 426; *Hdbk.* 2467.

On lime twigs. King's Cliffe, Blackheath, Bedford
Purlicus.

On elm. Kew Gardens, &c.

V. abnormis, *Fr.*, *Succ. Syll.* 4208.

On dead branches. Shere.

SUB-GEN. 6. **Calosphæria**, *Tul.* Perithecia nearly free beneath the loosened epidermis.

a. EU-CALOSPHERIA. *Perithecia rostellate.*

V. pulchella, *P.*, *Sacc. Syll.* 391; *Hdbk.* 2481.

On cherry bark. Weybridge, Albury, Ringstead, Bristol.

V. pusilla, *Wahl.*, *Sacc. Syll.* 393.

On bark. Batheaston.

V. dryina, *Curr.*, *Sacc. Syll.* 397; *Hdbk.* 2469.

On oak. Weybridge, N. Wootton.

b. EROSTELLA. *Perithecia not rostrate.*

V. vibratilis, *Fr.*, *Sacc. Syll.* 411.

On dead branches. Audley End; Essex, Norths.

B. Sporidia ovate or fusiform, or rod-like.

SUB-GEN. 7. **Cryptosporella**, *Sacc.* *Sporidia ovate or fusiform.*

V. hypodermia, *Fr.*, *Sacc. Syll.* 1801; *Hdbk.* 2483.

On elm branches. Kidbrooke, Batheaston, Terrington, &c.

V. aurea, *Fekl.*, *Sacc. Syll.* 1803; *Hdbk.* 2474 (= *amygdalina*, *Cke.*).

On hornbeam. Hampstead.

V. platanigera, *B. & Br.*, *Sacc. Syll.* 1817; *Hdbk.* 2477.

On plane. Leicestershire.

SUB-GEN. 8. **Cryptospora**, *Tul.* *Sporidia cylindrical or rod-shaped.*

V. suffusa, *Fr.*, *Sacc. Syll.* 4116; *Hdbk.* 2485.

On alder. Irstead.

On beech. Spye Park, Southgate.

V. intexta, *Curr.*, *Sacc. Syll.* 4119; *Hdbk.* 2486.

On oak. Weybridge.

V. corylina, *Tul.*, *Sacc. Syll.* 4120; *Hdbk.* 2487 (= *versatilis*, *Fr.*, *Sacc. Syll.* 4144).

On hazel. Shere.

V. betulæ, *Tul.*, *Sacc. Syll.* 4124.

On *Betula alba*. Kew Gardens, North Wootton, near Bristol.

C. Sporidia one or many septate.

SUB-GEN. 9. **Chorostate**, *Nike.* *Sporidia uniseptate.*

V. conjuncta, *Nees*, *Sacc. Syll.* 2353.

On bramble. Batheaston.

V. tritorulosa, *B. & Br.*, *Sacc. Syll.* 2355; *Hdbk.* 2494.

On hornbeam. Highgate.

V. carpini, *Pers.*, *Sacc. Syll.* 2357.

On walnut, hornbeam, sycamore. Scotland.

V. aceris, *Fekl.*, *Sacc. Syll.* 2363.

On maple. Darent, Norfolk.

- V. hippocastani*, Cooke, *Grev.* xiii., 98.
 On *Æsculus hippocastanum*. Kew Gardens.
V. oncostoma, Duby, *Sacc. Syll.* 2370 ; *Hdbk.* 2499.
 On *Robinia*. Swancombe, Darenth.
V. enterolenca, Fr., *Sacc. Syll.* 2372 ; *Hdbk.* 2501.
 On *Robinia*. Blackheath.
V. leiphemia, Fr., *Sacc. Syll.* 2385 ; *Hdbk.* 2490.
 On oak branches. Common.
V. Robergeana, Desm., *Sacc. Syll.* 2388.
 On *Staphylea pinnata*. Kew Gardens.
V. pulchra, Curr., *Sacc. Syll.* 2390 ; *Hdbk.* 2492.
 On dry sticks. Weybridge.
V. furfuracea, Fr., *Sacc. Syll.* 2396 ; *Hdbk.* 2493.
 On birch. Twycross, Shere.
V. fibrosa, Pers., *Sacc. Syll.* 2397 ; *Hdbk.* 2489.
 On blackthorn. Shere, Batheaston.
V. extensa, Fr., *Sacc. Syll.* 2398 ; *Hdbk.* 2488.
 On mountain ash. Chiselhurst, Charlton, King's Cliffe.
 On *Rhamnus catharticus*. Rockingham Forest.
V. faginea, Curr., *Sacc. Syll.* 2399 ; *Hdbk.* 2495.
 On beech. Eltham Grove.
V. ailanthi, *Sacc. Syll.* 2408.
 On *Ailanthus glandulosa*. Kew Gardens.
V. punctata, Cke., *Grev.* xiv., 47.
 On bark. Edinboro'.
V. æsculicola, Cke., *Grev.* xiv., 47.
 On *Æsculus hippocastanum*. Twycross, Sydenham, Melrose.
V. Bloxami, Cke., *Grev.* xiv., 47.
 On birch (?). Twycross.
V. olivæstroma, Cke., *Grev.* xiv., 48.
 On *Cerasus avium*. Jedburgh.
V. fuscidula, Cke., *Grev.* xiv., 48.
 On oak twigs. Highgate.
 CHOROSTELLA. *Sporidia appendiculate*.
V. decedens, Fr., *Sacc. Syll.* 2423.
 On elm twigs. Batheaston.
V. tessera, Fr., *Sacc. Syll.* 2424.
 On willow. Shere.
V. syngenesia, Fr., *Sacc. Syll.* 2425 ; *Hdbk.* 2462.
 On *Rhamnus frangula*. Forres, N. Wootton, Highgate.
V. taleola, Fr., *Sacc. Syll.* 2426 ; *Hdbk.* 2502.
 On oak branches. Common.
V. nidulans, Nssl., *Sacc. Syll.* 2428.
 On *Rubus idæus*. Bristol.
V. glyptica, B. & C., *Sacc. Syll.* 2433.
 On willow. King's Cliffe, Apethorpe.
V. tortuosa, Fr., *Sacc. Syll.* 2441.
 On branches. Alton.

SUB-GEN. 10. **Calospora**, *Sacc. Sporidia triseptate.*

V. stilbostoma, *Cooke, Sacc. Syll.* 2382 (= *rhois*, *Cooke*).

On *Rhus*. Swanscombe.

V. detrusa, *Fr., Sacc. Syll.* 2401; *Hdbk.* 2507.

On barberry. Wansford, Hants.

V. cratægi, *Curr., Sacc. Syll.* 2405; *Hdbk.* 2497.

On hawthorn. Shere, Kidbrooke, N. Wootton.

V. platanoides, *Pers., Sacc. Syll.* 3695; *Hdbk.* 2508.

On *Acer pseudo-platanus*. Kew Gardens and Shere.

On holly. Terrington, Bath.

V. Innesii, *Curr., Sacc. Syll.* 3696; *Hdbk.* 2513.

On small branches of sycamore. East Bergholt. Weybridge.

V. aglaostroma, *B. & Br., Sacc. Syll.* 3357; *Hdbk.* 2512.

On elm twigs. Leicestershire.

GEN. 2. **MELANCONIS**, *Tul.* Stroma valsæform, blackish or yellowish. Perithecia circinate. Sporidia uniseptate, hyaline or brownish. (Conidia = *Melanconium*.)

a. EU-MELANCONIS. *Sporidia not appendiculate, hyaline.*

M. stilbostoma, *Fr., Sacc. Syll.* 2343; *Hdbk.* 2454.

On birch. Blackheath, Weybridge, Hampstead, King's Lynn, Bristol, Lucknam, Wilts.

M. modonia, *Fr., Sacc. Syll.* 2344.

On *Castanea vulgaris*. Darenth, Weybridge, North Wootton.

b. MELANCONIDIUM. *Sporidia appendiculate, hyaline.*

M. alni, *Tul., Sacc. Syll.* 2349; *Hdbk.* 2455.

On alder. Southgate, Shere, Dinmore, Irstead, N. Wootton.

M. thelebola, *Fr., Sacc. Syll.* 2350; *Hdbk.* 2503.

On alder. Chiselhurst, Shere, Lewes, Irstead.

c. MELANCONIELLA. *Sporidia brown or brownish.*

M. spodiæi, *Tul., Sacc. Syll.* 2805.

On hornbeam. Highgate.

M. chrysostroma, *Fr., Sacc. Syll.* 2806; *Hdbk.* 2456.

On branches. King's Cliffe, Jedburgh, Highgate.

d. HERCOSPORA, *Fr.* Similar, but with the pycnidia = *Rabenhorstia*.

M. tiliaë, *Fr., Sacc. Syll.* 2352; *Hdbk.* 2496.

On lime. Shere, Hampstead, Blackheath, Jedburgh.

GEN. 3. **PSEUDOVALSA**, *Not.* Stroma valsæform, innate. Sporidia usually septate, brown.

* **VALSARIA.** *Sporidia uniseptate.*

P. parmularia, *Berk., Sacc. Syll.* 2816; *Hdbk.* 2506.

On oak. King's Cliffe.

P. Caproni, *Cke.*, *Grav.* xiv., 48.

On dry wood. Shere.

* *AGLAOSPORA*. *Sporidia* three (or more) septate.

† *Sporidia* not appendiculate.

P. profusa, *Not.*, *Sacc. Syll.* 3346.

On *Robinia*. Blackheath Park.

P. lanciformis, *Fr.*, *Sacc. Syll.* 3349; *Hdbk.* 2458.

On birch. Shooter's Wood, Weybridge, North Wootton, Wilts, Scarborough.

P. umbonata, *Tul.*, *Sacc. Syll.* 3351.

On *Quercus*. Kew Gardens.

P. longipes, *Tul.*, *Sacc. Syll.* 3353; *Hdbk.* 2459.

On oak. Chiselhurst, Philpotts, N. Wootton.

†† *Sporidia* appendiculate.

P. convergens, *Tode.*, *Sacc. Syll.* 3345.

On *Rubus*. Berwick. (Johnstone.)

P. aucta, *B. & Br.*, *Sacc. Syll.* 3360; *Hdbk.* 2708.

On alder. Spye Park, Wilts.

P. hapalocystis, *B. & Br.*, *Sacc. Syll.* 3361; *Hdbk.* 2515.

On plane. Batheaston.

On *Platanus ucerifolia*. Kew Gardens.

GEN. 4. **FENESTELLA**, *Tul.*, *Sacc. Syll.* 11, 325. Stroma cortical, valsæform. *Sporidia* multiseptate, muriform, or clathrate.

EU-FENESTELLA. *Sporidia* coloured.

F. princeps, *Tul.*, *Sacc. Syll.* 3995; *Hdbk.* 2510 (= *Valsa fenestrata*, *B. & Br.*).

On oak. Spye Park, Lynn, Batheaston, Elmhurst, Twycross.

F. tetratrupha, *B. & Br.*, *Sacc. Syll.* 3996; *Hdbk.* 2509.

On alder. Batheaston, Wilts.

F. vestita, *Fr.*, *Sacc. Syll.* 4004; *Hdbk.* 2514.

On beech twigs. Ringmer, Sussex; Eltham Grove.

On elm. Chiselhurst.

F. Lycii, *Duby*, *Sacc. Syll.* 4005.

On *Lycium barbatum*. Lynn.

F. salicis, *Rehm.*, *Sacc. Syll.* 4008.

On *Salix cinerea*. Kew.

Fam. 7. EUTYPEÆ. Stroma broadly and indefinitely effused, formed from the matrix. Perithecia immersed in the stroma, usually densely and broadly gregarious.

GEN. 1. **EUTYPA**, *Tul.* Stroma broadly effused in the bark or wood. Ostiolum small. Asci eight-spored. *Sporidia* sausage-shaped, hyaline.

* *Ostiola sulcate*.

E. Acharii, *Tul.*, *Sacc. Syll.* 618; *Hdbk.* 2396.

On dead branches. Common.

E. aspera, *Nke.*, *Sacc. Syll.* 620.

On branches. Queen's Cottage, Kew.

E. maura, *Fr.*, *Sacc. Syll.* 627.

On dead wood. Highgate.

E. spinosa, *Pers.*, *Sacc. Syll.* 635 ; *Hdbk.* 2399.

On branches. Wingfield Manor, Dinmore, Eltham, Scarborough'.

** *Ostiola not sulcate.*

E. lata, *Pers.*, *Sacc. Syll.* 637 ; *Hdbk.* 2397.

On ivy. Queen's Cottage Kew, Ringmer, Pentrich, Shrewsbury. Common.

E. leioplaca, *Fr.*, *Sacc. Syll.* 638 ; *Hdbk.* 2400.

On decorticated branches. Hampstead, King's Cliffe.

E. scabrosa, *Bull.*, *Sacc. Syll.* 640 ; *Hdbk.* 2401.

Inside a hollow elm. Shropshire. On maple. Lynn.

E. prorumpens, *Wallr.*, *Sacc. Syll.* 642.

On *Sorbus aucuparia*. King's Cliffe.

E. flavo-virens, *Tul.*, *Sacc. Syll.* 643 ; *Hdbk.* 2398.

On wood and branches. Common.

E. rhodi, *Nke.*, *Sacc. Syll.* 652 ; *Hdbk.* 2402.

On dead rose stems. Shere.

E. ulicis (*Fr.*), *Berk.*, *Sacc. Syll.* 668.

On furze. Langridge, Penzance.

NEW BRITISH ALGÆ.

A few months ago some quartz pebbles taken out of the river Poulter, which is a tributary of the Idle, near Retford, in Nottinghamshire, were sent to me to know what was the curious red lichen-like stain closely encrusting them, and bearing a remarkable resemblance to huge drops of clotted blood. If they had been taken from the sea shore, or its immediate neighbourhood, there would have been no difficulty in determining the red spots to be *Hildenbrandtia rubra*, but being from a fresh water habitat where they cover the whole bed of the stream for hundreds of yards, and at a considerable distance from the sea, and no Fresh Water *Hildenbrandtia* being mentioned in Cooke's "Fresh Water Algæ," it required Mr. Wm. Archer, of Dublin, to whom I submitted the specimens, to point out that the plant is *Hildenbrandtia rivularis*, Lieber (Rabenhorst's "Flora Europæa Algarum," p. 408), a Fresh Water Algæ common throughout Europe, but not, that I am aware of, hitherto recorded from the British Isles.

Since making this discovery, I have looked over my collection of uncertain and unexamined Algæ, and am pleased to have found the same plant on a large pebble which I gathered a few years ago from the shore of Ram's Island, in Lough Neagh, Co. Antrim ; and on a piece of rock which I chipped off the bed of a little streamlet in the wood at Rorstrevra, Co. Down.

H. W. LETT, M.A.

SYNOPSIS PYRENOMYCETUM.

(Continued from p. 86.)

Fam. 9. SUPERFICIALES, Fr. Perithecia discreta, superficialia, vel sub-superficialia.

Sub-Fam. 1. BYSSISEDÆ. Perithecia byssiseda.

GEN. 1. **BYSSOSPHERIA**. Cooke Grev., VII., 84. Perithecia glabra, e bysso plus minus distincto emergentia.

* CELOSPHERIA. *Sporidia hyalina, continua.*

2572. tristis, Tode. ... 378 2573. calyculus, Mont. ... 5891
2572.*luteobasis, Ellis. ... 639

* TRICHOSPHERIA. *Sporidia hyalina.*

2574. regulina, B. & Br. 1750 2577. corynephora, Cooke 6022
2575. regulinoides, Sacc. 1751 2578. paenostoma, B. & C.,
2576. acanthostroma, M. 1754 Grev. xv., 80.
= culcitella, B. & R. 4278 2579. aterrima, Fckl. ... 3632
= aculeata, B. & Br. 2580. solaris, C. & E. ... 3578

** INZENGEA. *Sporidia stellata, hyalina.*

2581. erythrospora, Borzi 6400

*** EU-ROSELLINIA. *Sporidia continua, fusca.*

A. *Bysso fusco-nigro.*

2582. aquila, Fr. ... 916 2594. sepulta, B. & C. ... 929
= byssiseda, P. 2595. tetradeniæ, B. & Br. 930
= carioni, Grog. in 2596. subænea, B. & C. 931
Roum., F. Gall. 839 2597. immunda, B. & C. 932
„ v. elegans, Duby. 2598. bothrina, B. & Br. 933
2583. corticium, Schw. ... 917 2599. emergens, B. & Br. 934
2584. thelena, Fr. ... 918 2600. marcucciana, Ces. 935
2585. andurnensis, Ces. 919 2601. ignobilis, Ces. ... 936
2586. salicum, Fab. ... 5924 2602. purpureo-fusca,
2587. buxi, Fab. ... 920 Schw. ... 4282
2588. Morthierii, Fckl. ... 921 2603. euomphala, B. & C. 1784
2589. Desmazierii, B. & Br. 922 = craterella, B. & R.
2590. bunodes, B. & Br. 923 2604. Macouniana, Ell. & Ev.
2591. Beccariana, Ces. ... 924 6308
2592. leprantha, Fr. ... 926 2605. quereina, Hart. 6309
2593. aucklandica, Rubh. 927

B. Byssopallido v. *laete colorato*.

- | | | |
|--------------------------------------|---------|---|
| 2606. pyxidella, <i>Ces.</i> ... | 928 | 2611. picta, <i>Berk., Grev.</i> xv. 81 |
| 2607. subiculata, <i>Schw.</i> | 925 | 2612. pardalios, <i>B. & C.</i> 4126 |
| 2608. mutans, <i>C. & Pk.</i> | 944 | 2613. epixantha, <i>B. & Br.</i> 4230 |
| 2609. rhodomela, <i>Schw., Grev.</i> | | 2614. epileuca, <i>B. & Br. Grev.</i> |
| | xv., 80 | |
| 2610. imposita, <i>Schw.</i> ... | 4281 | |

C. *Species incertæ.*

2615. *arctica*, *Fckl.* ... 6316

*** MELANOPSAMMA. *Sporidia uniseptata, hyalina.*

a. *Perithecia subglabra.*

2616. mendax, *Sacc.* & *R.* 2257 2618. alligata, *Fr.* ... 2335
2617. investans, *Cke.* ... 2333

b. *Perithecia rugosa*.

2619. querceti, *Rehm.* ... 2278 2620. imitatrix, *B. & Br.* 2334

*** ENCHNOSPHERIA. *Sporidia uniseptata, fusca.*

- | | | | | | | |
|-------|--|-----|------|-------|--|------|
| 2621. | <i>acicola</i> , <i>Cooke</i> | ... | 2753 | 2624. | <i>rhodomphala</i> , <i>Berk.</i> | 2258 |
| | = <i>Coulteri</i> , <i>Peck.</i> | { | 3600 | 2625. | <i>diffusa</i> , <i>Schw.</i> | ... |
| | | { | 6621 | 2626. | <i>conferta</i> , <i>Schw.</i> | ... |
| 2622. | <i>parietalis</i> , <i>B. & C.</i> | | 3601 | 2627. | <i>lanuginosa</i> , <i>B. & C.</i> | 2254 |
| 2623. | <i>rhodostieta</i> , <i>B. & Br.</i> | | 3624 | 2628. | <i>subiculosa</i> , <i>E. & Ev. Exs.</i> | |

*** HERPOTRICHIA. *Sporidia triseptata, hyalina.*

- | | | | |
|--------------------------------------|--------|-------------------------------------|------|
| 2629. rhodospila, <i>B. & C.</i> | { 3622 | 2631. innumera, <i>B. & Br.</i> | 3211 |
| | { 3619 | 2632. callimorpha, <i>Mont.</i> | 3212 |
| 2630. ceratotheca, <i>Cke.</i> | 6150 | = <i>ruborum</i> , <i>Lib.</i> ... | 2249 |

Sporidia pluriseptata, sub-hyalina.

2633. *helicophila*, Cke. ... 3274 2634. *solorinae*, Anzi. ... 3275

*** MELANOMMA. *Sporidia 2-3 septata, fusca.*

2635. epochnii, *B. & Br.* 3245 2637. ? globigera, *Moug.* 3265
2636. rhodomela, *Fr.* ... 3263

***** CHÆTOSPHERIA. *Sporidia 2-5 septata.*

- | | | | |
|--------------------------------------|----------|---------------------------------|----------|
| 2638. phæostroma, <i>Mont.</i> | 3200 | 2642. parvula, <i>Sacc.</i> | ... 3206 |
| 2639. phæostromoides, | | 2643. parvicapsa, <i>Cooke</i> | 3207 |
| <i>Pk.</i> | ... 3201 | 2644. rubiginosa, <i>Cooke,</i> | |
| 2640. bihyalina, <i>B. & Br.</i> | 3203 | <i>Grav. xv., 80</i> | |
| 2641. fusca, <i>Fckl.</i> | ... 3202 | | |

***** CUCURBITARIOIDEA. *Sporidia, muriformia, colorata.*

2645. *insularis*, *Ces.* 2550, 3982
2646. *viridescens*, *Sollm., Bot. Zeit.* xxi. (1863), p. 210.

*** LEPTOSPORA. *Sporidia continua, subhyalina.*

2684. sorbina, <i>Nyl.</i> ...	3566	2695 sphagnorum, <i>Cr.</i> ..	3576
2685. stannea, <i>Fr.</i> ...	3567	2696. cirrhostoma, <i>B. &</i>	
2686. ovina, <i>Pers.</i> ...	3568	<i>Br.</i> ...	3577
2687. hispidula, <i>S. & S.</i>	3569	2697. breviseta, <i>Karst.</i> ...	7050
2688. radiata, <i>Fekl.</i> ...	3570	2698. janus, <i>B. & Br.</i> ...	3579
2689. felina, <i>Fekl.</i> ...	3571	2699. scabra, <i>Curr.</i> ...	3580
2690. caudata, <i>Fekl.</i> ...	3572	2700. sulphurella, <i>S.</i> ...	3581
2691. erinita, <i>Pers.</i> ...	3573	2701. montis-caballi, <i>Sp.</i>	3582
2692. strigosa, <i>A. & S.</i>	3574	2702. immersa, <i>Karst.</i> ...	3583
2693. erinacea, <i>Cr.</i> ...	3575	2703. emergens, <i>Schw.</i> ...	4296
2694. romeana, <i>Sacc. &</i>		2704. stuppea, <i>Ell. & Ev.</i>	7052
<i>Berl.</i> ...	7051		

Species incertæ.

2705. calva, <i>Tode</i> ...	3584	2709. tephrotricha, <i>Fr.</i> ...	3589
2706. nitrosa, <i>Wallr.</i> ...	3586	2710. flavescens, <i>Fr.</i> ...	3590
2707. acinosa, <i>Batsch.</i> ...	3587	2711. depilata, <i>Fr.</i> ...	3591
2708. chloronema, <i>R. & Br.</i>	3588	2712. trichiacea, <i>Fr.</i> ...	3594

*** ERIOSPHÆRIA. *Sporidia didyma, hyalina.*

2713. vermicularia, <i>Nees.</i>	2328	2718. horridula, <i>Wallr.</i> ...	2336
2714. exigua, <i>Sacc.</i> ...	2329	2719. vermicularioides,	
2715. andromedæ, <i>Rehm.</i>	2330	<i>Sacc. & Roum.</i> ...	6536
2716. œnotria, <i>S. & S.</i> ...	2331	2720. inæqualis, <i>Grove.</i> ...	6537
2717. membranacea, <i>B. &</i>		2721. calospora, <i>Speg.</i> ...	6538
<i>Br.</i> ...	2332		

*** EULASIOSPHÆRIA. *Sporidia septata.*

† *Sporidia septata, hyalina.*

2722. hirsuta, <i>Fr.</i> ...	3538	2727. Libertiana, <i>Sp. &</i>	
<i>var. terrestris.</i>		<i>Roum.</i> ...	3544
2723. rufiseda, <i>Sacc.</i> ...	3539	2728. snbambigna, <i>Cke.</i>	3545
2724. cesariata, <i>C. & P.</i>	3541	2729. viridicoma, <i>C. & Pk.</i>	3546
2725. heliconia, <i>I. & P.</i>	3542	2730. canescens, <i>Pers.</i> ...	3547
2726. Montagnei, <i>Fr.</i> ...	3543	2731. xestothele, <i>B. & C.</i>	3548

†† *Sporidia septata, fusciscentia.*

2732. hispida, <i>Tode.</i> ...	3549	2738. capensis, <i>K. & C.</i>	3555
2733. racodium, <i>Pers.</i> ...	3550	2739. paucipilis, <i>Cke.</i> ...	3556
2734. orthotricha, <i>B. & C.</i>	3551	2740. musciicola, <i>Not.</i> ...	3557
2735. ferruginea, <i>Fekl.</i> ...	3552	2741. mutabilis, <i>Pers.</i> ...	3558
2736. Fuckelii, <i>Sacc.</i> ...	3553	2742. stipæ, <i>Fab.</i> ...	3559
<i>= depilata, Fekl.</i>		2743. ambigua, <i>Sacc.</i> ...	3560
2737. pezizula, <i>B. & C.</i>	3554		

††† *Sporidia color incertæ.*

2744. actinodes, <i>B. & C.</i>	3561	2746. tephrocoma, <i>B. &</i>	
2745. hemipsila, <i>B. & Br.</i>	3562	<i>Br.</i> ...	3564

HEMIARCYRIA CHRYSOSPORA, *Lister.*

A form of *Hemiarcyria*, which appears not to have been hitherto described, was sent to me by Mr. Henry Munro, of the Gardens, Cleavelands, Lyme Regis, on Dec. 4, 1886.

He found it in mature condition, on twigs of larch, lying on the ground, and on the surrounding herbage.

The sporangia are sessile, about 1 mm. in diameter, spherical, and generally closely aggregated, of a bright ochraceous yellow, resembling those of *Trichia chrysosperma*; the walls of the sporangia are membranous.

The yellow capillitium is a loosely formed net of spiral threads, 5 mk. in breadth, with many free ends, which terminate, as a rule, in slightly expanded conical apices; it is attached at numerous points to the basal wall of the sporangium.

The spirals, usually four in number, are closely arranged, and are connected by less prominent transverse processes, nearly at right-angles to the line of the spirals, and at distances about equalling that of the spirals from each other, giving a more chequered appearance than that exhibited by the longitudinal striæ of *Trichia chrysosperma*.

The bright yellow spores are 16 mk. in diameter; the central portion is surrounded by a hyaline coat 3 mk. in thickness, which is divided into about twenty polygonal areas; they bear a near resemblance to those of *Trichia chrysosperma*, a species which seems to be rare in this country, and for specimens of which I am indebted to Prof. Bayley Balfour.

The organism under consideration, except for the absence of free elaters, resembles in the closeness of the spirals and the diameter of the threads, robust specimens of *Trichia affinis*, which is abundant in our woods in late autumn, but the spores are markedly different, being considerably larger, with no appearance of pitting on the ridges, and with a thicker reticulated envelope.

The reticulation is even more brightly defined than in the spores of *Trichia chrysosperma*.

Lyme Regis, May 14, 1887.

ARTHUR LISTER.

WASTE PAPER.—Our readers should look out for another new book, which professes to be a "Field Book for Fungus Hunters," but is really only a hunter for their spare coppers. "Please pity the poor blind!"

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Grevillea,

A QUARTERLY RECORD OF

CRYPTOGAMIC BOTANY

AND ITS LITERATURE.

EDITED BY M. C. COOKE. M.A.. A.L.S.,

*Author of "Handbook of British Fungi," "Illustrations of British
Fungi," "Fungi, their uses," &c., "Rust, Smut, Mildew,
and Mould," "British Fresh Water Algæ,"
"British Desmids," &c., &c.*

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APPENDIX, containing revised diagnoses of the Hymenomycetes in "Cooke's Handbook," with additions, to accompany the "Illustrations," paged separately, in continuation pp. 209 to 256.

Grevillea,

A QUARTERLY RECORD OF CRYPTOGAMIC BOTANY
AND ITS LITERATURE.

NEW AUSTRALIAN FUNGI.

By M. C. COOKE.

Agaricus (Flammula) crociphyllus, Cke. & Mass.

Ochraceo-flavidus. Pileo carnosio, compacto, convexo, innato-squamuloso fibrillosoque, margine incurvo; stipite laterali, curto, (1 in. long, 1 in. crass), curvato, crasso, striatulo, sub-concolori, solido; lamellis subdistantibus, perlatis ($\frac{1}{2}$ in.), postice dente decurrentibus, læte lnteis. Sporis ellipticis, $10 \times 6 \mu$.

On wood. East Gipps Land (*Bauerlen*).

Pileus 2-3 in. broad, firm and woody when dry. Resembling *Ag. (Pholiota) spectabilis* in general appearance, but without trace of a ring.

Lentinus lasiophyllus, Cke. & Mass.

Cæspitosus. Pileis tenuibus, subdimidiatis, lobis circumscriptis, planis, postice depressis, lævibus, glabris, nitidis, ochraceis (2-4 unc. latis) stipitis abbreviatis, disciformibus, tomentosis, lamellis decurrentibus, subconfertis, linearibus, angustis, et intersticiis densissime velutino-tomentosis, acie subnudis, concoloribus.

On stumps. Gipps Land (*Hamilton* 506).

Lentinus fusipes, C. & Mass.

Pileo carnosio-lento (10 in. diam.) tenui, tenaci, tomentoso, glabrescente, postice tomentoso, albo, umbilicato, denum explanato, margine tenui, acuto. Stipite laterali, solido (8 unc. long, 1 unc. crass), fusiformi radicato, tomentoso-scribiculato, concolori; lamellis confertis, linearibus, angustissimis, decurrentibus, vix obscurioribus.

On rotten wood (?). Trinity Bay (*Sayer* 26).

Panus olivaceo-flavidus, Cke. & Mass.

Pileo fuligineo, densissime olivaceo-flavido, velutino, duro, compacto ($\frac{1}{2}$ -1 unc.), sessili, imbricato, conchiformi, marginae incurvo, lamellis radiatis, subdistantibus, latis, tenuibus, inæqualis (siccio fuligineis). Sporis arete ellipticis, $4 \times 2 \mu$.

On burnt wood. Bunyip, N.S.W. (*F. Campbell* 379).

Diploderma fumosa, Cke. & Mass.

Globoso-depressa, alba. Peridio exteriori fibroso, interiori pallido, fragili, capillitio radiato, intertexto, hyalino, attenuato, sporis globosis, echinulatis, fumosis (6-8 μ diam.).

In the ground. New South Wales (*F. Campbell* 400).

Diploderma alba, Cke. & Mass.

Subglobosum, pallidum, peridio exteriori tenui, persistente, interiori albo, cartilagineo. Capillitio simplici, radiato, contexto, nucleo centrali suberoso. Sporis globosis, lævibus, hyalinis (5 μ diam.).

In the ground. Cudgegong River, Australia (*Hamilton*).

Octaviana alveolata, Cke. & Mass.

Subglobosa vel irregularis ($\frac{1}{2}$ -1 in.), albida, dein subochracea, basi sterili obsoleto, intus pallidiori, lacunoso. Sporis globosis, alveolatis (10 μ diam.) pallide fuscis.

In the ground. Cudgegong River (*Hamilton* 514).

Uromyces fusisporum, Cke. & Mass.

Amphigenis. Soris discoideis, erumpentibus, atris, epidermide cinctis; protosporis subglobosis, breviter stipitatis, lævibus, fuscis 35-40 μ . Teleutosporis immixtis, fusiformibus, ad apicem hyalino-apiculatis, episporio obtuse verrucoso, fuscis, 60-70 \times 25-30 μ .

On phyllodes of *Acacia salicina*. Melbourne (*Baron v. Mueller*).

Puccinia alyxiæ, Cke. & Mass.

Hypophylla. Soris discoideis, compactis, atro-brunneis (1-2 mm. diam.), epidermide ruptâ cinctis. Teleutosporis subpyriformibus, medio constrictis, uniseptatis, flavidis, 50-70 \times 20-25 μ . Episporio crasso, lævi, ad apicem hyalino-apiculato; sporophoris crassiusculis, elongatis, hyalinis.

On fading leaves of *Alyxia buxifolia*. Brighton, Victoria (*F. Campbell* 375).

Phoma portentosa, Cke. & Mass.

Sparsa. Peritheciis innatis, cuticulâ denigratâ tectis, variabilis, papillatis, atris, nitidis. Sporulis cylindræis, utrinque obtusis, continuis, hyalinis, 8 \times 2 μ .

On pileus of *Polyporus portentosus*. Beveridge, V., Australia (*Campbell* 401).

Phoma goodeniarum, Cke. & Mass.

Epiphylla, sparsa. Peritheciis punctiformibus, minutis, atris, innatis, membranaceis. Sporulis subellipticis, binucleatis, continuis, hyalinis, 8-10 \times 5 μ .

On fading leaves of *Goodenia ovata*. Victoria, Australia (*F. Campbell* 370).

Diplodia lichenopsis, Cke. & Mass.

Maculis testaceo-rufis, determinatis, demum pallidis, vel rufo-cinctis, hinc illic confluentibus. Peritheciis semi-innatis, punctiformibus, atris, sporulis ellipticis, uniseptatis, medio constrictis, utrinque subattenuatis, brunneis, 20-25 \times 8-10 μ . Sporophoris æquilongis.

On phyllodes of *Acacia complanata*. Brisbane (*Bailey* 529).

Diplodina Dendrobii, Cke. & Mass.

Peritheciis epiphyllis, gregariis, innatis, atris, convexis, demum epidermide fissurato, supra denudatis, nitidis. Sporulis didymis, ellipticis, hyalinis, $20 \times 6-7 \mu$.

On leaves of *Dendrobium speciosum*. Brisbane (Bailey 553).

Phyllosticta Hardenbergiæ, Cke. & Mass.

Maculis amphigenis, variis, fuscis, peritheciis plerumque hypophyllis, minutissimis, gregariis, punctiformibus ($60-80 \mu$) atris. Sporulis minutis, subglobosis, hyalinis, $2-3 \mu$ diam.

On living leaves of *Hardenbergia*. Box Hill, V. Australia (F. Campbell 379).

Sacidium Camelliæ, Cke. & Mass.

Peritheciis sparsis, superficialibus, dimidiatis, atris, opacis, magnitudine variis, plerumque minutis. Sporulis sub-globosis, continuis, pallide fuscis, $10 \times 8 \mu$.

On fading leaves of *Camellia*. Melbourne (F. Campbell 372).

Phlyctæna passiflora, Cke. & Mass.

Caulicola. Peritheciis densissime gregariis, minutis, innatis, demum erumpentibus, deorsum incompletis, sporulis filiformi-uncinatis, hyalinis, $35 \times 1 \mu$.

On twigs of *Passiflora*. Brisbane (Bailey 535).

Glæosporium subglobosum, Cke. & Mass.

Epiphyllum. Acervulis sparsis, pallidis, inconspicuis, basidiis brevibus, conidiis subglobosis, in massam gelatinosam erumpentibus, $10 \times 8 \mu$.

On fading leaves of *Goodenia ovata*. Victoria (F. Campbell 370 b.).

Glæosporium citricolum, Cke. & Mass.

Maculis atrofuscis, parvulis, subdiscoideis, sæpe confluentibus; acervulis immersis; conidiis ovalibus, continuis, hyalinis, $8 \times 6 \mu$.

On orange leaves. Brisbane (Bailey 543).

Glæosporium musarum, Cke. & Mass.

Acervulis innato-erumpentibus, gregariis, subroseis. Conidiis elongato-ellipsoideis, utrinque rotundatis, continuis, hyalinis, $10-12 \times 4 \mu$ intus granulosus.

On ripe bananas. Brisbane (Bailey 520).

Torula mycetophila, Cke. & Mass.

Cæspitulis minutis, tenuissimis, sparsis, atris; hyphis parce ramulosis, subrectis; articulis globoso-compressis, fortissime constrictis, atro-olivaceis, 10μ diam.

On pileus of *Polyporus cinnabarinus*. Victoria (Campbell 388).

Scolecotrichum atriellum, Cke. & Mass.

Cæspitulis effusis, confluentibus, atris; hyphis erectis, simplicibus, breviter septatis, fuscis, sursum pallidioribus; conidiis acrogenis, ellipticis, uniseptatis, nec constrictis, atrobrunneis, $25 \times 12 \mu$.

On twigs of *Passiflora*. Brisbane, Australia (Bailey 514).

Harpographium quaternarium, Cke. & Mass.

Cæspitulis atris, minutis; stiptitibus compositis, sursum subclavatis, deorsum subfasciculatis, olivaceis, hyphis septatis, ad apicem

leniter incrassatis, subquadri-spiculatis. Conidiis fusiformibus, continuis, hyalinis, $12 \times 2-3 \mu$, spiculis tenuissimis, $10-15 \mu$ longis. Conidiis plerumque quaternatis.

On twigs of *Passiflora*. Brisbane (*Bailey* 512).

Fusarium (Fusisporium) longisporum, C. & M.

Sporodochiis erumpentibus, convexis, demum confluentibus, roseis, dein albidis. Hyphis repetiter dichotomis, septatis, hyalinis, conidiis fusiformibus, utrinque abrupte uncinatis, vel subrectis, acutis, 5 septatis, hyalinis, $100 \times 5-7 \mu$.

On twigs of *Passiflora*. Brisbane (*Bailey* 513).

Microcera rectispora, Cke. & Mass.

Sporodochiis subsphaeroideis, subsessilibus, primo rubellis, demum albidis, conidiis elongato-fusiformibus, utrinque acutis $7-9$ septatis, hyalinis, $150-200 \times 10 \mu$. Sporophoris brevibus, tenuibus, furcatis, hyalinis.

On coccus of the orange. Brisbane (*Bailey* 551).

Schizothyrium Eucalyptorum, Cke. & Mass.

Epiphyllum, subsuperficiale, maculis orbicularibus rufis insidens, minutum, lineari-ellipticum, atrum, nitidum, labris arete conniventibus, ascis clavatis, octosporis, sporidiis ellipticis, continuis, hyalinis, $8 \times 4 \mu$.

On fading leaves of *Eucalyptus obliqua*. Upper Yarra (*J. G. Luehmann*).

Triblidium caespitosum, Cke. & Mass.

Cespites sparsum, erumpens, atrum, 2-4 mm. diam. Cupulis (vix 1 mm. diam.) hemisphaericis, diu clausis, demum hiantibus, coriaceis. Ascis primitus subglobosis, octosporis. Sporidiis fusiformibus, utrinque rotundatis, quinquesepatis, hyalinis, demum turgidis, subellipticis, muriformi-divisis, $40-45 \times 15-18 \mu$.

On bark. Berwick; Victoria (*F. Campbell* 384).

Sphaerostilbe microspora, Cke. & Mass.

Peritheciis ascigeris in fungi conidiophori basi, vel consortio, minutis, sparsis, ovatis, aurantiacis, laevibus. Ascis clavatis, stipitatis, octosporis; sporidiis distichis, ellipticis, uniseptatis, hyalinis, nec constrictis, $6 \times 2-3 \mu$. Conidiophoris stilboideis, erectis, pallidis, stipite laevi, sursum subattenuato, crassiusculo; capitulo globoso concolori (potius primitus carneo) conidiis ellipticis, continuis, hyalinis, $10 \times 6 \mu$.

On bark. Melbourne (*F. Campbell* 397).

Xylaria elastica, Cooke.

Suberoso-elastica, subglobosa (1-2 unc diam.), vel hemisphaerico-convexa, sessilis, nigrescens, ostiolis punctiformibus, peritheciis numerosis, congestis, lateraliter compressis, contextu spongioso-elastico, albido. Ascis clavato cylindraceis, octosporis. Sporidiis uniseriatis, amygdalæformibus, binucleatis, fuscis, $12 \times 6-7 \mu$.

On rotten wood. Trinity Bay (*Sayer*).

Near *Xylaria regalis*, Cke., but sporidia double the diameter, and whole substance more elastic than usual in this genus, and moreover it is sessile, hence No. 668a in *Synopsis Pyrenomycetum*.

Phyllachora (Montagnella) eucalypti, *Cke. & Mass.*

Epiphylla, orbicularis, convexa, nitida (2-3 mm. diam.) lævis, loculis paucis. Ascis pyriformibus, quadrisporis; sporidiis subfusiformibus, utrinque rotundatis, uni dein triseptatis, nec constrictis, diu hyalinis, demum palide fuscis ($35-40 \times 10 \mu$).

On dead leaves of *Eucalyptus*. Bunyip, Australia (*F. Campbell* 399).

Gibberella (Lisiella) passifloræ, *Cke. & Mass.*

Peritheciis crumpenti-superficialibus, in cæspitulos parvos aggregatis, globulosis, subpapillatis, contextu læte cyaneo, celluloso. Ascis subfusoides, octosporis. Sporidiis ellipticis, continuis, hyalinis, $12 \times 5 \mu$.

On stems of *Passiflora*. Brisbane (*Bailey* 535).

Sphærella Alyxiæ, *C. & M.*

Amphigena. Peritheciis gregariis, innatis, subglobosis, epidermide denigratâ tectis, demum collabescentibus. Ascis clavato-cylindræcis, octosporis; sporidiis lanceolatis, uniseptatis, hyalinis, $25 \times 7 \mu$.

On dead leaves of *Alyxia buxifolia*. Brighton, Victoria (*F. Campbell* 275a).

Leptosphaeria camelliæ, *Cke. & Mass.*

Maculis epiphyllis, arescendo fusciscentibus, vagis, peritheciis sparsis, punctiformibus, vix papillatis, pertusis. Ascis subclavatis, plerumque quadrisporis, breviter stipitatis. Sporidiis distichis, fusoides, curvulis, triseptatis, vix constrictis, virescentibus, $25-27 \times 5-6 \mu$.

On living leaves of *Camellia*. Victoria (*F. Campbell* 372).

Asterina correacola, *Cke. & Mass.*

Epiphylla, maculis orbicularibus, nigris. Peritheciis convexo-applanatis (60μ diam.) atris, in maculis congestis, margine fimbriato. Ascis subglobosis, octosporis, sporidiis ellipticis, uniseptatis, vix constrictis, utrinque rotundatis, fuscis ($25-28 \times 10-12 \mu$).

On living leaves of *Correa Laurenciana*. Upper Yarra, Australia (*J. G. Luehmann*).

Peziza (Humaria) Hartmanni, *Phillips.*

Gregaria, sessilis, substipitatisque, concava, demum expansa, margine scissili, hymenio pallide coccineo, extus albo, glabrato; ascis cylindræcis ad basin attenuatis, octosporis; sporidiis subcymbiformibus vel oblongo-ellipticis, biguttulatis, hyalinis, $15-21 \times 6-9 \mu$.

On decayed stick. Condamine River (*Hartmann*).

Cups 2-3 lines broad. Asci about 150μ long by 10μ broad; sporidia tinted yellowish red.

Calloria decipiens, *Phillips.*

Gregaria vel sparsa, sessilis, sicco subimmersa, hymenio plano, vel concaviusculo, pallide incarnata, aurantio-rubro, vel pallide brunneo, extus concolori, granuloso; margine suberecto, subinde denticulato, ascis cylindræcis-clavatis, octosporis; sporidiis fusiformibus, continuis, hyalinis, $5-7 \times 1-2 \mu$, paraphysibus filiformibus, sursum abrupte incrassatis.

On old twine. Brisbane (*Bailey* 516).

Cups $\frac{1}{2}$ -1 line broad. The enlarged apices of the paraphyses somewhat resemble those of *C. lasia*, B. & Br., as does the whole plant, but are more irregular in outline; the sporidia are only half the length, and more obtuse at the ends, and the exterior of the cups is glabrous.

NEW BRITISH FUNGI.

By M. C. COOKE.

(Continued from Vol. xv., p. 111.)

Phoma Muhlenbeckiæ, Cke. & Mass.

Perithecia exceedingly minute, sub-cuticular, densely gregarious, dark brown, membranaceous, subglobose, papillate. Sporules elliptical, continuous, at first on short basidia, hyaline, $3 \times 2 \mu$.

On dead stems of *Muhlenbeckia*. Kew Gardens, May, 1887.

Phoma Ryckholtii, Sacc. Syll. 484.

On *Symphoricarpus*. Dee.

Phoma phlomidis, Thum. Sacc. Syll. 771.

On *P. fruticosa*. Kew.

Phoma insularis, Cke. & Mass.

Perithecia gregarious, for the most part collected on determinate, dark-coloured spots (resembling *Diaporthe*), circumscribed by a black line, subcuticular, at length cracking the epidermis. Sporules narrowly elliptical, with a nucleus near each end, continuous, hyaline ($10 \times 3 \mu$).

On twigs of *Aucuba Japonica*. Kew.

Differing considerably in the sporules from *P. aucubæ*, Sacc.

Phoma araliæ, Cke. & Mass.

Perithecia gregarious, mostly seated upon irregular, blackened spots, small, subglobose, elevating, and at length piercing the cuticle. Sporules oval or elliptical, continuous, hyaline, $8 \times 4 \mu$.

On stems of *Aralia spinifera*. Kew.

Phoma dulcamarina, Sacc. Syll. 757.

On *Solanum*. Kew.

Phoma saligna, Fr. Trail. Scot. Nat., 1887, p. 90.

On *Salix cinerea*. Aberdeen.

Phoma cladodiæ, Cke. & Mass.

Perithecia on both surfaces, very numerous, minute, punctiform, subcuticular, black, densely gregarious, sometimes occupying the whole surface. Sporules almond-shaped, continuous, hyaline, on short basidia ($10 \times 5 \mu$).

On cladodes of *Ruscus hippoglossus*. Kew, May, 1887.

Phoma gneriicolum, Cke. & Mass.

Perithecia minute, scattered or gregarious, soon becoming superficial, membranaceous (not more than $30\ \mu$ diam.) dark brown, subglobose. Sporules minute, elliptical, hyaline, $3 \times 1\ \mu$.

On leaves of *Gynierium argenteum*. Kew.

Macrophoma cylindrospora, Desm. Sacc. Syll. 761.

On ivy leaves. Forfar.

Macrophoma thujana, Cke. & Mass.

Perithecia somewhat scattered, subcuticular, globose, elevating, and at length piercing the epidermis. Sporules elliptical, continuous, hyaline, $25 \times 10\ \mu$.

On twigs of *Thuja*. Kew.

Aposphæria nitens, Cke. & Mass.

Perithecia gregarious, erumpent, black, shining, globose, papillate, rather small, at length nearly superficial. Sporules cylindrical, obtuse at the ends, continuous, hyaline, $10 \times 2-3\ \mu$.

On decayed pine wood. Kew.

Aposphæria Broomeiana, Berk. in Herb. No. 6490.

Sporules minute, $2 \times 1\frac{1}{2}\ \mu$.

On wood. Mortlake, King's Cliffe.

Aposphæria agminalis, Sacc. Syll. 1029.

On *Juglans regia*. Kew.

Rabenhorstia ribesia, Cke. & Mass.

Stroma or conceptacles erumpent, globoso-truncate, often discoid, internally divided into cells, subcarbonaceous, black. Sporules elliptical, continuous, hyaline, $20 \times 10\ \mu$.

On slender twigs of *Ribes aurea*. Kew.

Strongly resembling *Dothidea* (*Plowrightia*) *ribesia* P.

Cytispora hyalosperma, Fr. Sacc. Syll. 1507.

On *Acer pseudoplatanus*. Kew.

Cytispora juglandina, Sacc. Syll. 1555.

On *Juglans regia*. Kew.

Cytispora macilenta, Sacc. Syll. 1506.

On *Acer obtusatum*. Kew Gardens.

Dothiorella myricariæ, Cke. & Mass.

Pustules gregarious, erumpent. Perithecia minute, black, crowded on a verruciform stroma, not numerous, subpapillate sporules, $8-10 \times 6\ \mu$.

On twigs of *Myricaria dahurica*. Kew.

Phyllosticta hederæ, Sacc. Syll. 101.

On ivy leaves. Aberdeen.

Phyllosticta ulmariae, Thum. Sacc. Syll. 223.

On leaves of *Spiræa*. Aberdeen.

Phyllosticta scrophularinea, Sacc. Syll. 254.

On *S. nodosa*. Montrose, Aberdeen.

Asteromella æsculicarpa, Cke. & Mass.

Effused black spots on decaying carpels, on which are scattered minute, immersed black perithecia, which at length pierce the

cracked cuticle. Sporules subcylindrical, obtuse, or allantoid, continuous, hyaline ($10-12 \times 3-4 \mu$).

On husks of *Æsculus hippocastanum*, on the ground. Kew Gardens, May, 1887.

Coniothyrium inconspicuum, Cooke.

Perithecia very minute, inconspicuous, in short lines, innate. Sporules elliptic, continuous, brown, at first on short basidia ($10 \times 4-5 \mu$).

On leaves of *Gynerium argenteum*. Claygate.

Coniothyrium palmarum, Cke. & Mass.

Perithecia subcuticular, scattered, small, subglobose, elevating, but scarcely piercing the cuticle. Sporules oval, continuous, brown ($8 \times 4-5 \mu$).

On dead leaves of *Chamærops humilis*. Kew.

Coniothyrium conoideum, Sacc. Syll. 1780.

On stems of *Angelica*. Aberdeen.

Sphæropsis helicis, Cke. & Mass.

Usually seated on a black stroma, sometimes free. Perithecia rather large, black, semi-immersed, carbonaceous, with a long exerted neck. Sporules oval, continuous, at first on short sporophores, becoming very dark and opaque, almost black ($12 \times 8 \mu$).

On ivy twigs, in company with *Diaporthe pulla*. Kew Gardens.

Quite different from *Coniothyrium Hederæ* in the stroma, rostrate carbonaceous perithecia, and larger sporules.

Sphæropsis lignicola, Cke. & Mass.

Perithecia gregarious, for the most part in lines, following cracks in the wood, sometimes confluent, dull black, subglobose, laterally compressed and distorted, nearly superficial, minutely pierced. Sporules subglobose, or oval, continuous, brown, about $15 \times 10 \mu$.

On decorticated branches. Kew.

Asteroma juncaginearum, Rabh. Sacc. Syll. 1285.

On *Triglochin*. Aberdeen.

Diplodina corni, Cooke.

Gregarious, perithecia subglobose, black, papillate, covered by the cuticle, which is pierced by the ostiola. Sporules narrowly elliptical, uniseptate, not constricted, hyaline ($10-12 \times 3 \mu$).

On twigs of *Cornus sanguinea*. Shotover Plantation (Baxter).

Diplodina ascochytoides, Sacc. Syll.

On *Lavatera thuringiaca*. Kew Gardens.

Haplosporella Baxteri, Cke. & Mass.

Forming erumpent clusters of rather large elongated, obconical, shining black perithecia, which are pierced at the apex. Sporules elliptical, straight or curved, continuous, rounded at the ends, brown ($22-30 \times 8-10 \mu$).

On dead branches. Oxford (Baxter).

Haplosporella æsculi, Cke. & Mass.

Perithecia small, black, densely crowded in elliptical or angular erumpent clusters (5 mm. long), seated on a cellular stroma, resembling a *Cucurbitaria*, pierced with a minute pore. Sporules elliptical, continuous, pale olive, $5-7 \times 3 \mu$.

On branches of *Æsculus*. Kew.

Haplosporella viticola, Cke. & Mass.

Erumpent, more or less in longitudinal series, pustules elliptical, composed of ten, or more, rather large, dull black, subglobose perithecia, scarcely pierced, and with the habit of *Botryosphaeria*. Sporules large, oval or broadly elliptical, continuous, yellow brown ($30-35 \times 10-15 \mu$), basidia thick, about as long as the sporules.

On stems of *Ampelopsis*. Kew Gardens.

Leptothyrium berberidis, Cke. & Mass.

On both surfaces of fading leaves, minute, punctiform, black, scattered, discoid. Sporules cylindrical, rounded at the ends, continuous, hyaline ($8-9 \times 1\frac{1}{2}-2 \mu$).

On leaves of *Berberis vulgaris*. Oxford (Baxter).

Excipula ramicola, Cke. & Mass.

Perithecia superficial, scattered or gregarious, disciform, convex, black, rather small ($\frac{1}{4}$ mm.). Sporules cylindrical, obtuse, $25-30 \times 4 \mu$, hyaline, multi-nucleate, perhaps at length multi-septate (*Excipulina*), on short simple basidia.

On decorticated branches of *Acer obtusatum*. Kew.

Coniothecium viticolum, Cke. & Mass.

Tufts erumpent, hemispherical, black, rather compact, loosely gregarious, conidia rounded, subglobose, variously agglutinated together, with from 2 to 4 cells, usually quaternate, pale olive ($12-15 \mu$ diam.).

On dead twigs of *Vitis vinifera*. Kew. May, 1887.

Allied to *C. epidermidis*. Corda.

Camarosporium ephedræ, Cke. & Mass.

Scattered. Perithecia subcuticular, at length erumpent, with the upper half exposed, subglobose, black, pierced at the apex. Sporules elliptical, triseptate, with one or two of the cells transversely divided, brown ($20 \times 8-10 \mu$).

On twigs of *Ephedra andina*. Kew.

Camarosporium syringæ, Cke. & Mass.

Somewhat gregarious on bleached spots. Perithecia subcuticular, elevating and at length piercing the epidermis, subglobose, black, papillate. Sporules elliptical, not constricted, triseptate, with one or two of the cells transversely divided, brown ($15-17 \times 8-10 \mu$).

On twigs of *Syringa Emoli*. Kew.

Differing from *C. Ephedræ* in the smaller and more gregarious perithecia, which are collected on bleached spots, and in the comparatively broader sporules.

Coryneum pustulatum, Peck. *Sacc. Syll.* 4069.

On *Castanea*. Kew.

Oospora inæqualis, Cke. & Mass.

Very thin, effused, like a glaucous bloom, pale grey. Conidia very unequal in size and form, from globose to elliptical, united in short curved, simple, or branched threads, hyaline, from $5\ \mu$ to $10 \times 5\ \mu$.

On culms of Bamboo. Kew.

Oidium farinosum, Cooke *Fungi Britt.* No. 345.

White, mealy, effused, covering the young leaves and twigs as if dusted with flour. Threads simple, breaking up into elliptical, truncate joints, or conidia, which are smooth, $28-30 \times 12\ \mu$. *Mycol. Univ.*, No. 1772. *Vize, Micro-fungi*, No. 78.

On apple leaves and twigs. Various localities in England.

First found and described in 1870 or 1871, but reference to the description cannot now be found. It is *not* included in Saccardo's *Sylloge*.

Monosporium coprophilum, Cke. & Mass.

Snowy-white, tufts subglobose, at length confluent. Threads interwoven, septate, fertile threads short, repeatedly dichotomous, branches ascending, slightly attenuated upwards, conidia ovate, continuous, hyaline, granular within, $12-15 \times 10\ \mu$.

On dung. Kew.

Botrytis corolligenum, Cke. & Mass.

Scattered, white; threads erect, septate, very shortly branched near the tips; conidia oval, crowded in small subglobose heads, continuous, hyaline, $25 \times 15-18\ \mu$.

On *Calceolaria* flowers. Kew Gardens.

Botrytis (Polyactis) croci, Cke. & Mass.

Small dark smoky tufts, sometimes confluent and effused, threads thick, rather closely septate, slightly branched at the attenuated apices, pale olive below, colourless above. Conidia elliptical, continuous, hyaline, $15-18 \times 8-10\ \mu$, collected at the tips of the threads, or branchlets, in small capituli of from 3 to 7 or 8 conidia.

On dead leaves of *Crocus*. Kew.

Rhinotrichum niveum, Cke. & Mass.

Tufted, caespitose, snowy white. Threads erect, simple, septate, not quite so thick as the diameter of the spores; upper joint, and sometimes the second, bearing conical spicules, which support the ovate conidia. Conidia rather large, continuous, hyaline, ovate or subelliptical, with a persistent minute apiculus at the base, $20-25 \times 10-12\ \mu$.

On dead wood. Chiswick.

Torula (Tetracolum) gyrosa, Cke. & Mass.

Forming small punctiform tufts, black, conidia subquadrate, nucleate, three or four united in variously curved threads, which

are often agglutinated side by side, pale olive, $12 \times 6-8 \mu$. Scarcely constricted at the joints.

On rotting pine wood. Kew.

Hadrotrichum arundinaceum, Cke. & Mass.

Black, at first in small hemispherical tufts, and at length confluent in velvety patches, threads branched, septate, creeping, sooty, sending up erect, simple fertile branches, each bearing a subglobose opaque conidium, 30μ diam., nearly black.

On dead *Arundo conspicua*. Kew.

Heterosporium minutulum, Cke. & Mass.

Forming dark olive velvety patches, of variable size and form. Threads somewhat fasciculate, short, flexuous, sparingly septate, pale olive. Conidia 1-2 septate, elliptical, rounded at the ends, not constricted, pale olive, epispore rough, $16-20 \times 6-8 \mu$.

On leaves of *Chamærops pumilis*. Kew.

Stemphylium asperosporum, Cke. & Mass.

Wholly mouse-grey. Tufts irregular, confluent, and somewhat effused. Threads creeping, septate, branched, hyaline, fertile branches erect, slender, a little branched about the apices. Tips of the branchlets swollen into a compressedly globose torus, bearing the sessile subglobose conidia. Conidia composed of 2, 3, or 4 warted cells, fuliginous brown, each cell about 12μ diam.

On wall paper. Upper Holloway, London.

Resembling, in some respects, *Stemphylium alternariæ*, but the conidia are supported upon a distinct pyriform hyaline receptacle, and they are externally warted, consisting of but few cells.

Fusarium viticola, Thum. Sacc. Syll. 3288.

On *Ampelopsis*. Kew Gardens.

Graphium graminum, Cke. & Mass.

Scattered, minute, dispersed over the dead leaves and culms, grey. Stems erect, compounded of delicate septate threads, almost colourless when separated. Conidia elliptical, continuous, hyaline, $6 \times 3-4 \mu$.

On *Glycerium argenteum*. Kew.

Graphium calicioides (Berk.), C. & M.

Spores hyaline, subelliptical, minute, $3-4 \times 2 \mu$.

Part of *Periconia calycioides* of Berkeley.

On dead wood. Kew, Glamis.

Haplographium olivaceum, Cke. & Mass.

Somewhat effused, dark olive, nearly black. Threads erect, septate, simple, dark, slightly clavate at the paler apex. Conidia narrowly elliptical, catenulate in simple chains, $12-14 \times 4 \mu$, pale olive, forming a subglobose rather lax capitulum.

On rotten wood. Isleworth.

BRITISH PYRENOMYCETES.

BY G. MASSEE.

(Continued from Vol. xv., p. 121.)

GEN. 2. **DIAPORTHE**, *Ntke. Sacc. Syll.* 1., 606.—Stroma eutypeoid, usually circumscribed by a black line. Sporidia hyaline, fusiform, quadrinucleate, then 1-3 septate.

* Euporthe. *Perithecia immersed in the wood.*

- D. ancubæ, *Sacc. Syll.* 2466 (= *insularis*, Berk. in Herb.).
On *Aucuba Japonica*. Milton.
- D. spiculosa, *A. & S., Sacc. Syll.* 2450.
On branches. Jedburgh.
- D. Badhami, *Curr., Sacc. Syll.* 2455; *Hdbk.* 2446.
On branches. Pentrick.
- D. pulla, *Ntke., Sacc. Syll.* 2459; *Hdbk.* 2647.
On ivy. Neatishead, Forden, Kew, Brentry.
- D. protracta, *Nitschke, Sacc. Syll.* 2461.
On elm. Leigh Woods.
- D. meduseæa, *Ntke., Sacc. Syll.* 2466.
On *Rubus*. Highgate.
- D. cryptica, *Ntke., Sacc. Syll.* 2472.
On honeysuckle. Kent.
- D. ceuthosporoides, *Berk., Sacc. Syll.* 2488.
On leaves of cherry laurel. Edinburgh.
- D. samaricola, *Plow., Sacc. Syll.* 2489.
On samari of ash. Terrington.
- D. pinophylla, *Plow. & Phil., Sacc. Syll.* 2491.
On pine leaves. Belmont, Hereford.
- D. occulta, *Fekl., Sacc. Syll.* 2493.
On scales of fir cone. Eastbourne.
- D. ilicina, *Cooke, F. B. II., Sacc. Syll.* 490.
On *Ilex*. Forden.
- D. Berkeleyi, *Desm., Sacc. Syll.* 2494.
On *Angelica*. Twycross, Highgate.
- D. inquilina, *Wall., Sacc. Syll.* 2501.
On *Conium*. Bishop's Wood, Lynn.
- D. orthoceras, *Fr., Sacc. Syll.* 2504.
On *Achillea*, &c. Forden.
- D. acus, *Blox., Sacc. Syll.* 2511; *Hdbk.* 2686.
On dock. Perth, Neatishead, Kew, Black Rock Quarry.
- D. aretii, *Lasch., Sacc. Syll.* 2512.
On thistles. Abridge, The Avon.
- D. adunca, *Desm., Sacc. Syll.* 2514.
On *Plantago lanceolata*. Kent.
- D. discors, *Sacc. Syll.* 2516.
On *Rumex obtusifolius*. Castle Rising, Black Rock Quarry.

- D. euphorbiæ*, *Cke.*, *Sacc. Syll.* 2517.
On *Euphorbia*. Darenth. Dinmore.
- D. obsoleta*, *Sacc. Syll.* 2522.
On *Hypericum*. Shrewsbury.
- D. vincæ*, *Cke.*, *Sacc. Syll.* 2523.
On *Vinca*. Forden.
- D. Desmazierii*, *Nsl.*, *Sacc. Syll.* 2524.
On *Prunella*. Dinmore.
- D. Tulasnei*, *Ntke.*, *Sacc. Syll.* 2526.
On *Lamium*, &c. Shrewsbury.
- D. ceramblicola*, *B. & Br.*, *Sacc. Syll.* 2415.
On cabbage. Forres.
- D. Chailletii*, *Ntke.*, *Sacc. Syll.* 2531.
On *Atropa belladonna*.
- D. duleamaræ*, *Ntke.*, *Sacc. Syll.* 2532.
On bittersweet. Lynn.
- D. pantherina*, *B.*, *Sacc. Syll.* 2541 ; *Hdbk.* 2689.
On *Pteris aquilina*. Shere.

** Tetrastaga. *Perithecia immersed in the bark.*

A. CORTICOLÆ.

- D. rudis*, *Fr.*, *Sacc. Syll.* 2543.
On laburnum.
- D. sarothamni*, *Awd.*, *Sacc. Syll.* 2545.
On *Sarothamnus*. Darenth, Lynn, Scarboro', Swanscombe, Shere.
- D. inæqualis*, *Curr.*, *Sacc. Syll.* 2546 ; *Hdbk.* 2440.
On furze. Weybridge, Shere.
- D. Wibbei*, *Ntke.*, *Sacc. Syll.* 2555.
On *Myrica gale*. Terrington.
- D. rostellata*, *Fr.*, *Sacc. Syll.* 2557 ; *Hdbk.* 2725.
On *Rubus*. Wandsworth Common, King's Lynn, Bristol.
- D. vepris*, *Lacr.*, *Sacc. Syll.* 2559 ; *Hdbk.* 2664.
On *Rubus*. Weybridge, N. Wootton.
- D. incarcerationata*, *B. & Br.*, *Sacc. Syll.* 2563 ; *Hdbk.* 2442.
On *Rosa*. Weybridge, Kew Gardens, Leigh Down.
- D. cerasi*, *Fckl.*, *Sacc. Syll.* 2570.
On *Prunus*. Shere.
- D. revellens*, *Ntke.*, *Sacc. Syll.* 2575.
On *Corylus*. Leigh Woods, Bristol.
- D. juglandina*, *Fckl.*, *Sacc. Syll.* 2577 ; *Hdbk.* 2619.
On walnut twigs. Apethorpe.
- D. phyllireæ*, *Cooke*, *Sacc. Syll.* 2579.
On *Phyllirea*. Kent.
- D. reseccans*, *Ntke.*, *Sacc. Syll.* 2580.
On *Syringa vulgaris*. Kew Gardens. Terrington, Botanic Gardens, Edinboro'.
- D. obscurans*, *Sacc. Syll.* 2583.
On ash. Forres.

- D. scobina*, *Ntke.*, *Sacc. Syll.* 2584.
On small ash branches. Darenth, Coombe Place, Weybridge.
- D. ciliaris*, *Curr.*, *Sacc. Syll.* 2586; *Hdbk.* 2639.
On ash. Weybridge, Pentrich.
- D. discutiens*, *B.*, *Sacc. Syll.* 2587; *Hdbk.* 2643.
On elm. On ivy. King's Lynn.
- D. alnea*, *Fckl.*, *Sacc. Syll.* 2588.
On *Alnus*. Dinmore.
- D. blepharodes*, *B. & Br.*, *Sacc. Syll.* 2591; *Hdbk.* 2646.
On *Acer pseudo-platanus*. Mossburnford, Twycross, Terrington, Leigh Down.
- D. Beckhausii*, *Ntke.*, *Sacc. Syll.* 2592.
On *Viburnum opulus*. Darenth, Kew, N. Wales, Ashton.
- D. circumscripta*, *Oth.*, *Sacc. Syll.* 2593.
On *Sambucus nigra*. Kew Gardens, Blaise Castle Woods.
- D. ophites*, *Sacc.*, *Sacc. Syll.* 2595.
On *Hibiscus Syriacus*. Kew Gardens.
- D. Ryckholtii*, *West.*, *Sacc. Syll.* 2596.
On *Symphoricarpus*. Kew Gardens.
- D. velata*, *P.*, *Sacc. Syll.* 2600; *Hdbk.* 2638.
On lime twigs. King's Cliffe, Pentrich, Lynn.
- D. corni*, *Fckl.*, *Sacc. Syll.* 2601.
On *Cornus*. Kew Gardens.
- D. Laschii*, *Ntke.*, *Sacc. Syll.* 2609.
On *Euonymus Europæus*. Mickleham.
- D. importata*, *Ntke.*, *Sacc. Syll.* 2610.
On *Lycium barbarum*. Castle Rising.
- D. putator*, *Ntke.*, *Sacc. Syll.* 2611.
On *Populus tremula*. S. Wootton.
- D. spina*, *Fckl.*, *Sacc. Syll.* 2612.
On *Salix aurita*. N. Wootton, Lynn.
- D. quadrinucleata*, *Curr.*, *Sacc. Syll.* 2624; *Hdbk.* 2661.
On ash sticks. Eltham, Weybridge.

B. HERBICOLÆ.

- D. epilobii*, *Cke.*, *Sacc. Syll.* 2627.
On *Epilobium*. Dinmore, Kew Gardens.
- D. striæformis*, *Fr.*, *Sacc. Syll.* 2628; *Hdbk.* 2426.
On dead stems of Umbellifers. West Water, N.B.
- D. pardalota*, *M.*, *Sacc. Syll.* 2639; *Hdbk.* 2690.
On *Convallaria multiflora*. Shere, Milton.
- D. lirella*, *M. & N.*, *Sacc. Syll.* 2562; *Hdbk.* 2685.
On *Spiræa ulmaria*. King's Cliffe, Kew Gardens, Scarboro', N. Wootton.

SOME EXOTIC FUNGI.

BY M. C. COOKE.

Sphæronema tenuirostris, *Cke.*

Gregarious, perithecia black, depressedly globose, seated beneath the cuticle, which is pierced by the long slender beaks, which are gradually attenuated towards the pallid apex, and three to four times as long as the diameter of the perithecia. Sporules cylindrical, rounded at the ends, straight or slightly curved, continuous, hyaline ($21 \times 5 \mu$) seated on long sporophores.

On bark. Westbrook, Maine, U.S.A. (*Rev. E. C. Bolles*).

Polyporus (Lobati) talpæ, *Cke.*

Imbricato-multiplex, e carnosus lentus, subcoriaceus, pileis dimidiatis, latissimis, flaccidis, breviter velutinis, demum profunde rugulosis, fuliginosis; ambitu pallidioribus; stipitibus (?); poris mediis, angulatis, subæqualibus, vix dentatis, concoloribus. Contextu pallido.

On stumps. Minas Geraes (*Glaziou* 16,679).

Pileus 10-12 in. diam., $\frac{1}{2}$ in. thick. Tubes scarcely exceeding 1 mm. long. Near *P. giganteus* and *P. acanthoides*.

Lentinus Camaroensis, *Cke. & Mass.*

Pileo carnosos-coriaceo (6-10 in. diam.), infundibuliformi, ochraceo-pallido, velutino, disco squamoso-diffracto, margine patente, tenui, acuto; stipite centrali, vel subexcentrico, æquali, solido, tomentoso (3 in. long, 1 in. diam.) adscendente. Lamellis subconfertis, linearibus, angustis, decurrentibus, obscurioribus.

On trunks. Rio del Rey, Camarons (*H. H. Johnston* 105).

Allied to *L. Barteri*, *Berk.*, but quite distinct in the velvety pileus and stem.

Tuberculina Africana, *Cke. & Mass.*

Sporodochiis hemisphæricis vel globoso-depressis, exiguis, purpureo-fuscis; conidiis globosis, hyalinis, 3-4 μ , basidiis crassiusculis, continuis, 3 μ .

Around an *Æcidium*, on *Ophiocaulon cissampyloides*. Gaboon (*E. L. Simmonds*).

The spores of the *Æcidium* are hexagonal, 17-20 μ , which seems to indicate a distinct species, but the *Æcidium* is not in sufficiently good condition for description.

Phoma Oryzæ, *Cke. & Mass.*

Perithecia minute, scattered, at length piercing the cuticle, subglobose, black. Sporules oval, continuous, hyaline, on short basidia, $3 \times 2 \mu$.

On rice straw. Calcutta, India.

Gonatobotryum (Dichobotryum) dichotomum, *Cke. & Mass.*

Effusum, fuscum. Hyphis fertilibus erectis, septatis, bis terve dichotomis, conidiis ad angulos gerentibus, ellipticis, continuis hyalinis, vel pallide olivaceis, $15 \times 10 \mu$, glomerulis subglobosis.

On starchy substances, damaged by wet, from India.

Differs from the type form of *Gonatobotryum* in the threads being several times dichotomous, with the globose glomerules of spores at each bifurcation.

Gliocladium compactum, *C. & M.*

Cæspitulis minutis, punctiformibus, ferrugineis. Hyphis erectis, congestis, cæspitulos compactos efformantibus, septatis, plerumque simplicibus, capitulo conidiorum cuneati, pallide fusco, diu mucro obvoluto; conidiis conglutinatis, oblongis, concatenatis, $5 \times 3 \mu$. hyalino-fusco.

On paper from India.

SYNOPSIS PYRENOMYCETUM.

(Continued from Vol. xv., p. 125.)

**** ENCHNOSPHERIA. *Sporidia 2-pluriseptata, hyalina.*

2747. pinetorum, <i>Fckl.</i> ...	3595	2754. Schiedermayeriana,	
2748. passerinis, <i>Sacc.</i> ...	3596	<i>Fckl.</i>	... 3616
2749. santonensis, <i>Sacc.</i>	3597	2755. rhenana, <i>Fckl.</i>	... 3617
2750. caput-medusæ, <i>S. &</i>		2756. rubi, <i>Fckl.</i>	... 3618
<i>Sp.</i>	... 3598	2757. heterostoma, <i>Karst.</i>	3621
2751. peltigeræ, <i>Fckl.</i> ...	3599	2758. macrotricha, <i>B. &</i>	
2752. biformis, <i>Pers.</i> ...	3585	<i>Br.</i>	... 3623
= <i>terrestris</i> , <i>Sow.</i>		2759. macrostomella, <i>Ces.</i>	5480
2753. scopula, <i>C. & Pk., Grev.</i>		2760. cryptostoma, <i>Ler.</i>	2250
xv., 82		2761. Molleriana, <i>Wint.</i>	7055
		2762. calospora, <i>Wint.</i> ...	7056

GEN. 4. **CONIOCHÆTA**, *Sacc. I.*, 269. *Perithecia hispida, sporidia colorata.*

* *Sporidia elliptica, continua, fusca.*

2763. ligniaria, <i>Grev.</i> ...	991	2776. aspernula, <i>M.</i>	... 1004
2764. Niesslii, <i>Awd.</i> ...	992	2777. Gagliardi, <i>Not.</i> ...	1005
2765. malacotricha, <i>Awd.</i>	993	2778. horrida, <i>Huzs.</i> ...	1006
2766. hirtissima, <i>Ph.</i> ...	995	2779. chordicola, <i>Sacc.</i> ...	1007
2767. foveolata, <i>B. & C.</i>	996	2780. calva, <i>Tode.</i>	... 1009
2768. ambigua, <i>Sacc.</i> ...	997	2781. rhynchospora, <i>Hark.</i>	6314
2769. abietina, <i>Fckl.</i> ...	998	2782. spinosa, <i>Hark.</i> ...	6315
2770. detonsa, <i>Cke., Grev.</i> xv. 82		2783. horridula, <i>Sacc.</i> ...	6313
2771. xylarispora, <i>C. & B.</i>	999	2784. palustris, <i>Schrot.</i> ...	6317
2772. velutina, <i>Fckl.</i> ...	1000	2785. hericium, <i>Schweiz., Grev.</i>	
2773. subcorticalis, <i>Fckl.</i>	1001	xv., 82	
2774. platani, <i>Fckl.</i> ...	1002	2785.* Colensoi, <i>Cke., Grev.</i>	
2775. sanguinolenta,		xv., 16	
<i>Wallr.</i>	... 1003		

** HYPOCOPRA. *Sporidia continua, fusca, hyalino-caudata.*

- | | | | |
|--------------------------|-----|---------------------------|------|
| 2786. capillifera, Curr. | 895 | 2788. brassicæ, Klot. ... | 859 |
| 2787. lasioderma, D. R. | | 2789. rattus, Schw. ... | 4291 |
| § M. ... | 894 | = ranella, Berk. | 2894 |

** CHÆTOMASTIA. *Sporidia pluriseptata, fusca.*

- | | | | |
|----------------------|----------|--------------------------------|------|
| 2790. hirtulum, K. | ... 3280 | 2793. hispidulum, Sacc. | 3283 |
| 2791. pilosellum, K. | ... 3281 | 2794. exilis, Schwz. Grev. xv. | 82 |
| 2792. canescens, Sp. | ... 3382 | 2795. squamulata, Schwz. | 4290 |

** PLEOSPHERIA. *Sporidia muriformia, colorata.*

† *Asci octospori.*

- | | | | |
|----------------------------|----------|--------------------------|----------|
| 2796. pilosella, S. | ... 3923 | 2801. hispida, Fr. | ... 3928 |
| 2797. strigosa, S. | ... 3924 | 2802. mori, Sch. | ... 3929 |
| 2798. australis, Sp. | ... 3925 | 2803. mutabilis, P. | ... 3930 |
| 2799. microloncha, B. & C. | 3926 | 2804. hispidula, Lamb. | ... 3931 |
| 2800. pulvinulus, B. | ... 3927 | 2805. rhodochlora, Mont. | 1752 |

†† *Asci sexdecemspori.*

2806. sexdecemspora, Oke. 3872

Species dubie.

- | | | | |
|----------------------------|----------|---------------------------|----------|
| 2807. hericium, Wallr. ... | 4286 | 2814. involuta, Schw. | ... 4295 |
| 2808. subclavata, Lagg. | 4287 | 2815. cladosporiosa, | |
| 2809. horridula, Wallr. | 4288 | Schw. | ... 4297 |
| 2810. setosa, Schw. | ... 4289 | 2816. cæspitulans, Schw. | 4298 |
| 2811. penicillata, Schw. | 4292 | 2817. cincinnata, Fr. | ... 4299 |
| 2812. monstrosa, Schw. | 4293 | 2818. viridiatra, Schw. | ... 4300 |
| 2813. intonsa, Schw. | ... 4294 | 2819. basitrichia, Wallr. | 4301 |

GEN. 5. **VENTURIA**, Not. Sacc. Syll. i., 586. — Perithecia setulosa, membranacea, plerumque follicolæ. Sporidia oblonga, hyalina.

A. *Sporidiis uniseptatis.*

* *In Dicotyledoneis lignosis.*

- | | | | |
|----------------------------|----------|------------------------------|----------|
| 2820. chlorospora, Ces. | 2288 | 2829. curviseta, Peck. in | |
| 2821. islandica, Johans. | 6519 | Ellis. N.A.F. 1356 | |
| 2822. ditricha, Fr. | ... 2289 | 2830. nobilis, Sacc. | ... 2294 |
| 2823. inæqualis, Cooke... | 2290 | 2831. applanata, Ell. § | |
| 2824. cassandrae, Peck. | 6520 | Mart. | ... 6522 |
| 2825. Kunzei, Sacc. | ... 2291 | 2832. cupulata, E. & M. | 6524 |
| = chetomium, Kunze | | 2833. Saccardioides, E. & M. | 6523 |
| 2826. Clintonii, Peck. | ... 2292 | 2834. lonicerae, Fekl. | ... 2295 |
| 2827. ilicifolia, Cooke | ... 2293 | 2835. vermiculariæformis, | |
| 2828. socia, Sacc. & Berl. | 6521 | Fekl. | ... 2296 |
| | | 2836. orbicula, Schw. | ... 2297 |

2837. grossulariæ, <i>Awd.</i> 2298	2847. barbula, <i>Cooke</i> ... 2304
2838. curviseta, <i>Peck.</i> ... 5625	2848. pusilla, <i>Sp. & R.</i> 2305
2839. Dickiæi, <i>B. & Br.</i> 2299	= <i>conoplea</i> , <i>Cooke</i>
2840. pulchella, <i>C. & P.</i> 2300	2849. chaetomium, <i>Corda</i> 2306
2841. elegantula, <i>Rehm.</i> 6527	2850. Spegazziniana, <i>Cke.</i> 2307
2842. myrtilli, <i>Cooke</i> ... 2301	2851. pezizoidea, <i>S. & E.</i> 6087
2843. gaultheriæ, <i>Ell.</i>	2852. Stranssi, <i>S. & R.</i> 6528
<i>& Ev.</i> ... 6529	2853. arctostaphyli, <i>C. &</i>
2844. compacta, <i>Peck.</i> ... 2302	<i>Hk.</i> ... 6526
2845. atramentaria, <i>Cooke</i> 2303	2854. maculosa, <i>Ellis,</i>
2846. aggregata, <i>Winter</i> 6530	<i>N.A. Fungi</i> 200

** *In Dicotyledoneis herbaceis.*

2855. petasidis, <i>Fckl.</i> ... 2308	2861. alchemillæ, <i>Grev.</i> 2314
2856. Johnstoni, <i>B. & Br.</i> 2309	2862. anthophila, <i>Pass.</i> 6532
2857. Balansæ, <i>Speg.</i> ... 6531	2863. Niesslii, <i>Sacc.</i> ... 2315
{glomerata, <i>Cooke</i> 2310	= <i>atriseda</i> , <i>Rehm.</i> exs. 646
2858. { = <i>Robergei</i> , <i>Desm.</i>	2864. potentillæ, <i>Fries</i> 2316
{circinans, <i>Fr.</i> ... 2311	2865. subtilis, <i>Fckl.</i> ... 2317
2859. cephalariæ, <i>K. & C.</i> 2312	2866. nubigena, <i>Speg.</i> ... 6087
2860. bonariensis, <i>Speg.</i> 2313	2867. genistæ, <i>Fckl.</i> ... 2127

* * *In monocotyledoneis.*

2868. graminicola, <i>Wint.</i> 2318	2870. microchæta, <i>Pat.</i> 6533
2869. exosporioides,	2871. eres, <i>B. & Br.</i> ... 2320
<i>Desm.</i> ... 2319	2872. bryophila, <i>Fckl.</i> ... 2321

B. VENTURIOLA. Sporidiis continuis.

2873. integra, <i>Cooke</i> ... 2322	2875. Kalmiæ, <i>Peck.</i> ... 2324
2874. trichella, <i>Q.</i> ... 2323	2876. montellica, <i>Sacc.</i> ... 2325

C. Species incertæ.

2877. riparia, <i>Sacc.</i> ... 2326	2878. alpina, <i>Sacc.</i> ... 2327
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D. PROTOVENTURIA. Sporidia didyma, fuliginea.

2879. rosæ, <i>Not.</i> ... 6572

E. ACANTHOSTIGMA. Sporidia 1-5 septata, hyalina.

2880. perpusillum, <i>De Not.</i> 3602	2890. gracile, <i>Niessl.</i> ... 3611
2881. affine, <i>Succ. & Berl.</i> 7053	2891. Berenice, <i>B. & C.</i> 3612
2882. revocatum, <i>Sacc.</i> 3603	2892. guaraniticum, <i>Speg.</i> 7054
2883. sequoiæ, <i>Plow.</i> ... 3604	2893. helminthosporum,
2884. pulchrisetum, <i>Ph.</i> 3605	<i>Rehm.</i> ... 3613
2885. corysiphoides, <i>Rehm.</i> 3606	2894. decastylum, <i>Cke.</i> 3614
2886. minutum, <i>Fckl.</i> ... 3607	2895. byssophilum, <i>Rehm.</i> 3615
2887. scleracanthum, <i>S.</i> 3608	2896. nivalis, <i>Strauss.</i> ... 6534
2888. pygmaeum, <i>S. & S.</i> 3609	2897. occidentalis, <i>Ell. &</i>
2889. Clintonii, <i>Ph.</i> ... 3610	<i>Ev.</i> ... 6535

GEN. 6. **CHÆTOMIUM**, Kunze. Sacc, Syll. 1., 220.—Perithecia submembranacea, fragilia, pilosa. Asci diffluentes. Sporidiis continuis, fuscis.

* *Asci polyspori.*

2898. fimiscum, Karst. 827

** *Asci octospori.*

- | | | | |
|-----------------------------|------|-----------------------------|------|
| 2899. elatum, Kunze ... | 793 | 2917. orientale, Cooke ... | 809 |
| = comatum, Sacc. | | 2918. tomentosum, Pr. | 810 |
| 2900. lageniforme, Corda | 794 | 2919. signatum, Pr. ... | 811 |
| 2901. atrum, Link. ... | 795 | 2920. lanosum, Peck. ... | 812 |
| 2902. pannosum, Wallr. | 796 | 2921. sphærospermum, | |
| 2903. indicum, Corda ... | 797 | C. & E. ... | 813 |
| 2904. microsporum, Speg. | 798 | 2922. olivaceum, C. & E. | 814 |
| 2905. globosum, Kunze | 799 | 2923. fimicolum, Cooke | 815 |
| 2906. chartarum, Ehr.... | 800 | 2924. velutinum, Ell. & Ev. | 6390 |
| 2907. Fieberi, Corda ... | 801 | 2925. melioloides, C. & P. | 816 |
| 2908. affine, Corda ... | 802 | 2926. griseum, Cooke ... | 817 |
| 2909. murorum, Corda | 803 | 2927. depressum, Wallr. | 818 |
| 2910. streptothrix, Quelet. | 804 | 2928. concinnatum, Pr. | 819 |
| 2911. cymatotrichum, | | 2929. lanatum, Quelet.... | 820 |
| Cooke ... | 6301 | 2930. Libertiae, R. & P. | 5918 |
| 2912. spirale, Zopf. ... | 805 | 2931. paucisetum, Fckl. | |
| 2913. bostrychodes, Zopf. | 806 | F. Rehm. ... | 1572 |
| 2914. crispatum, Fckl.... | 807 | 2932. delicatulum, Roum. | |
| 2915. macrosporum, S. & P. | 5919 | Rev. Myc. t. 50, f. 7. | |
| 2916. cuniculorum, Fckl. | 808 | 2933. polypori, Rehm. ... | 5917 |

Spec. desciscentes.

- | | | | |
|--------------------------|-----|--------------------------|-----|
| 2934. stercoreum, Speg. | 822 | 2938. amphitrichum, | |
| 2935. calvescens, Sacc. | 823 | Corda ... | 826 |
| 2936. rufulum, B. & Br. | 824 | 2939. Braunii, Rabh. ... | 828 |
| 2937. araliae, Corda ... | 825 | 2940. graminicolum, | |
| | | Rabh. in Fckl. No. 647 | |

* * *Asci tetraspori.*

2941. hispidum, Fr. ... 821

*** *Species dubiae.*

- | | | | |
|---------------------------|-----|---------------------------|-----|
| 2942. coccodes, Wallr.... | 829 | 2946. Cumingii, Lev. ... | 833 |
| 2943. epiphyllum, Kunze | 830 | 2947. Douglasii, Schw.... | 835 |
| 2944. gelatinosum, Ehr. | 831 | 2948. typhæ, Schw. ... | 836 |
| 2945. viride, Lev. ... | 832 | | |

*** BOMMERELLA. March. Sacc. Addit., p. 38.

Sporidia triangularia, depressa.

2949. trigonospora, March. 6302

TWO REMARKABLE FUNGI.

BY M. C. COOKE.

Cerebella paspali, Cke. & Mass.

Stroma convex, hemispherical (2.3 mm.), minutely gyroseoplicate, dark olive, sporules subglobose, or subquadrate, divided into 3 or 4 cells (after the manner of *Urocystis*), which ultimately separate, olive, epispore smooth, $20 \times 25 \mu$, ultimate cells 10-12 μ diam. Basidia of branched, interlaced hyphæ, which are tinged red, although hyaline, and septate towards the base.

On glumes of *Paspalum scrobiculatum*. Brisbane (Bailey 560).

This genus was established by Cesati in 1851, but the diagnosis appears never to have been published. The typical species, *Cerebella andropogonis*, was issued in Klotzsch "Herbarium vivum mycologicum," No. 1587, and the brief description published in the "Botanische Zeitung," 1851, p. 699. Berkeley wrote an account of it, with rude figures, in "Gardener's Chronicle," 1852, p. 643; but little notice appears to have been taken of it by Saccardo, who excludes it.

The affinities of this genus could not be determined by Cesati, and Berkeley also seems to have been in doubt, although he suggested a possible relationship to *Urocystis*. This suggestion appears to be reasonable as far as *Cerebella andropogonis* is concerned, where the compound spores arise from a cellular stroma, but in the present species the stroma is filamentous, at least outwards, and the threads and spores suggest at once *Stemphylium*, as interpreted by Prof. Saccardo; whilst on the other hand the habit and general appearance suggests an alliance with the *Ustilagines*. For the present, and until further information is obtained, we prefer to accept Berkeley's suggestion, and place the genus temporarily near *Urocystis*.

The other remarkable fungus is a species of *Hemiarcyria*, which we have called—

Hemiarcyria appplanata, Cke. & Mass.

Sporangia flattened, discoid, usually combined into a lobate plasmodiocarp, externally glaucous, or pale cinereous, internally bright yellow, apparently uniformly sessile. Tubes of capillitium furcate, or anastomosing, scarcely so wide as the spores, thickenings in the form of half-rings (as in *Arcyria*) encircling the tubes in a diffused spiral. Spores globose, warted, 12 μ diam.

On rotting *Cycas*. Brisbane (Bailey 557, in part).

The threads of the capillitium resemble those of some species of *Arcyria*, but the entire plant seems to have a closer affinity to such species as *Hemiarcyria serpula*. When growing it might at first be mistaken for *Peziza cinerea*.

ANNUAL FUNGUS FORAYS.

THE ESSEX FIELD CLUB.—This meeting has been fixed for Friday, September 30th, and Saturday, October 1st.

CRYPTOGAMIC SOCIETY OF SCOTLAND.—The thirteenth Annual Conference will meet at Greenock, under the presidency of Rev. Hugh Macmillan, D.D., LL.D., on Tuesday, 4th October.

WOOLHOPE FIELD CLUB.—The usual week commences on October 3rd, and ends October 7th, at Hereford. The principal Foray for two days in the Forest of Dean.

SOCIÉTÉ BOTANIQUE DE PARIS.—A series of mycological excursions have been proposed, extending from about October 16th.

HAMPSHIRE NATURAL HISTORY SOCIETY.—A project is on foot for a two days' Foray in the New Forest, about the 26th or 28th of October.

BRITISH MOSS FLORA, PART X.

We are glad to see another part of the "Moss Flora," by Dr. R. Braithwaite, completing the Tortulaceæ and the Weberaceæ, giving also a supplement to the portion already issued, with Index and Title Page to the first volume. For this we should at least be thankful. One volume, containing 225 species and 45 plates, with 3,000 figures, is at least a "splendid fragment," but, let us hope, not long to be a "fragment," of the British Moss Flora.

TRANSACTIONS OF THE WOOLHOPE CLUB.

The publication of the "Herefordshire Pomona" delayed the issue of these Transactions since 1876, but now that the Pomona has been completed, the Club has set itself to bring its Transactions up to date, and this volume is an instalment, including the years 1877 to 1880, the remainder to 1886 being in preparation. Of the contents of this volume we shall say but little, since nearly 10 years is a very considerable period for manuscripts on scientific subjects to rest in pigeon-holes; but, inasmuch as it completes the records of the Club down to a period not quite so remote, it will be welcome to members and friends. This volume has been carefully edited by Mr. H. Cecil Moore, and equals any of its predecessors.

COOKE'S BRITISH DESMIDS.

This work, now completed within the promised twelve months, is issued, bound in one volume in green cloth, gilt tops, at two and a half guineas. The number of species included is 370, which is more than double the 162 of Ralfs' "British Desmidiæ," and nearly six times as many as were included in Hassall's "Fresh Water Algæ," whilst only 60 less than the 430 of Wolle's "Desmids of the United States."

HENRY WILLIAM RAVENEL, LL.D.

We regret to record the death of our old friend and correspondent, H. W. Ravenel, of Aiken, S. Carolina, who passed over to the great majority on July 17, 1887, at the age of seventy-three years. A good correspondent, an indefatigable collector, a shrewd observer, and a conscientious man, if not a profound scientist, he was an enthusiastic Botanist, amid the cares and troubles of an anxious life.

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DR. GEORG. WINTER.

As we are going to press we are grieved to be informed of the death of our talented friend Dr. Georg. Winter, the editor of "Hedwigia."

Grevillea,

A QUARTERLY RECORD OF CRYPTOGAMIC BOTANY
AND ITS LITERATURE.

SOME EXOTIC FUNGI.

BY M. C. COOKE.

Cucurbitaria Ravenalii, Cke. & Mass.

Peritheciis sub-cutaneis, erumpentibus, cæspitosis, atris, subglobois, papillatis, stromate pulvinato insidentibus. Ascis cylindraceis, octosporis; sporidiis lanceolatis, 3-5 septatis, loculis transverse divisis, olivaceis ($50 \times 15-18 \mu$).

On *Ailanthus glandulosa*. Aiken, S. Carolina (*Ravenal*, 2278).

Evidently different from *C. ailanthi*, Rabh., vide Sacc. Syll. II., No. 3958.

Cylindrocolla quercina, Cke. & Ellis.

Pustules verrucæform, erumpent, orange, sporophores dichotomous, conidia cylindrical, obtuse, hyaline, concatenate ($20 \times 3 \mu$).

On dead twigs of *Quercus*. New Jersey (*Ellis*, 2355).

Hypocrea (Clintoniella) amazonica, Cooke.

Stromate irregulari, suborbiculari, plano-convexo, margine obtuso, libero, atro-fuligineo; peritheciis astomis, vel pertusis. Ascis cylindraceis, octosporis; sporidiis lanceolatis, continuis, hyalinis, $25-30 \times 3-4 \mu$. Conidiophoris consociatis, subglobois-depressis, ochraceis, carnosis, demum corneis, pulvere pallidiore tectis, conidiis ellipticis, continuis, hyalinis, utrinque hyalino-apiculatis ($18 \times 3 \mu$).

On dead leaves. Para (*Spruce*, *Lichenes Amazonici*, No. 528).

Polystictus (Discipedes) Makuensis, Cooke.

Pileo coriaco-membranaceo, plano-depresso, zonato, glabrato, nitido, badio, fusco, vel castaneo; margine acuto, lobato, sinuato, vel subintegro; carne albo. Stipite subelongato, pallido, plerumque crasso, ad basim disciformi. Hymenio albido. Poris rotundatis, vix minutis ($\frac{1}{4}-\frac{1}{3}$ mm.) regularibus, dissepimentis tenuibus, acie dentatis.

On wood. Namuli, Makua Country, East Tropical Africa (*J. T. Last*).

Pileus $3\frac{1}{2}$ in. broad, scarce $\frac{1}{4}$ in. thick. Stem about an inch long, and over one-third of an inch thick. Allied to *P. flabelliformis*, but differs in the whiter hymenium, much larger and toothed pores, and the snowy whiteness of the flesh, which is soon destroyed by insects.

***Mycenastrum bovisioides*, Cke. & Mass.**

Peridio globoso, sessili, tenui (circa 1 unc. diam.) primitis spinulis albis evanescentibus superne tecto, demum nudo, fusco, glabro, poro apicali pertuso, capillitio densissimo, subferrugineo. Hyphis utrinque attenuatis, multi-furcatis, sparse spinulosis. Sporulis olivaceo-fuscis, globosis, glabris, longe pedicellatis ($5\ \mu$ diam.).

On ground, amongst moss. Neilgherries (in Herb. Berkeley).

***Stachybotrys asperula*, Mass.**

Effusa, atra. Hyphis gregariis, repentibus, furcato-ramosis, assurgentibus, granulato-asperulis, sterigmatibus clavatis, capitato-coronatis, conidiis globosis, asperulis ($7-10\ \mu$), atro-fuscis, opacis.

In company with *Chatomium*. On damp paper from Ceylon. Kew.

OVULARIA BULBIGERA, Sacc.

A short visit this summer to the classic ground of the keen-sighted mycologist of the Rhine produced, among other things, a minute fungus on the leaflets of *Poterium Sanguisorba*, which appears to be identical with his rare *Scolicotrichum bulbigerum* (Symb. Myc., p. 106; *Ovularia bulbigera*, Sacc. Syll. iv., 140), but differs somewhat from his description. It causes small, roundish, pale-ochreous spots ($2-4$ mm. diam.) on the leaves. These spots are visible on both surfaces, but on the upper surface they are surrounded by a purplish-brown border ($\frac{1}{2}-1$ mm. broad), which does not show beneath. The spots, in fact, closely resemble those of *Septoria Rubi*, but are without the greyish tinge of the latter. The fungus is produced only on the lower surface, and presents the usual appearance of an *Ovularia*; the hyphæ are in dense, pure white tufts, about $\frac{1}{10}$ mm. high, the tufts being thickly scattered over the whole lower surface of the spot, and forming, when full grown, a thin crust, like, but less dense than, that of *O. sphaeroidea*, Sacc., to which in other respects this fungus bears a slight resemblance. The hyphæ are from 70 to 130 mk. long, 4 mk. thick, simple or occasionally branched, hyaline, continuous or rarely 1-septate, flexuous, here and there denticulate, and so closely attached to one another longitudinally that it is difficult to separate one from the mass. At the tapering apex and on the denticles are borne sub-globose or slightly ovoid conidia, 9-11 mk. in transv. diam., and reaching a length of 15 mk.

So far the fungus agrees with Fuckel's diagnosis (except that he

makes no reference to the spots), but the "thickened black base" which he mentions, and from which the name "*bulbigerum*" is derived, is entirely wanting. The hyphæ are no thicker at the base than elsewhere. But many of the tufts do spring from a little brownish pustule or tubercle of the leaf, which is apparently the beginning of the perithecium, and presumably that of *Sphærella pseudomaculæformis*, Awd., which Fuckel himself records as appearing on the same leaves somewhat later in the year, and to which he assigns the *Ovularia* as conidial form. Can this tubercle, or fragments of it, be what Fuckel alludes to in the words "*e basi incrassato nigro ortis*," although certainly neither his specific name nor his description would naturally lead one to that conclusion? The question must be settled by someone who has access to the original specimens.

W. B. GROVE, B.A.

REVISION OF POLYSACCUM.

By G. MASSEE.

Polysaccum, *Desp. & D. C.*; *Rapp. Voy.*, II., p. 80; *Fries Syst. Myc.*, III., p. 51.

Peridium simple, rigid, dehiscing irregularly, filled with numerous small cavities, with rigid walls (peridiola), and containing the spores.

In this genus the vegetative portion of the capillitium is compacted together to form the rigid walls of the peridiola, into which the fertile threads project and bear the spores; hence only a few shrivelled threads are found mixed with the spores. In *Scleroderma* there is also a tendency to form peridiola, but the walls are not rigid or well defined. *Hippoperdon* also has a honeycombed capillitium, which, however, remains soft and elastic.

P. pisocarpium, *Fr. S. M.*, III., p. 54.

Peridium subglobose, passing downwards into a short stem-like base. Peridiola large, irregular, angular, 4.5×2.3 mm., yellow; spores spherical, warted, coffee-colour, $9-13 \mu$. *Krombh.*, Heft. 8, p. 20; taf. lx., f. 9, 10. *Deitr.*, Deutsch. Fl. (Schwämme), pl. 118. *Winter*, Krypt. Fl., p. 890. *P. acaule*, *D. C.*, *Rapp. de Voy.* II., p. 80; Fl. Fr. vi., p. 103. *P. arenarium*, *Corda*, Ic. Fung. tom. II., p. 24, 25; tab. xii., f. 91. *P. olivaceum*, *Fr. S. M.* III., 54. *P. capsuliferum*, *Seer. Myc. Suisse.* III., p. 373. *Pisolithus arenarius*, *Alb. et Schw.*, Conspect. Fung., p. 82; tab. i., f. 3. *Pisocarpium arenarium*, *Nees. Syst.* I., p. 27. *Lycoperdon capsuliferum*, *Sow.*, Eng. Fung., pl. 425. *Exsicc.*, Rav. Fung. Amer., 470. *Roumeg.*, Fung. Gall., 1311. *Welch.*, Crypt. Lusitana, 60.

Peridium smooth, even, or rather tuberculose, fragile, dehiscing irregularly, reddish-brown, tinged olive, 1-3 in. diam. Sowerby's plant is undoubtedly this species, and was at the time correctly referred to the fig. of Alb. and Schw. given above, which in turn is synonymous with *P. pisocarpium*.

On the ground in sandy places. Europe, N. America, Australia, New Zealand.

P. boreale, *Karst., Myc. Fenn.* (Basidiomycetes), p. 363.

Peridium subspharoid or obovoid, substipitate, white. Peridiola irregular, oblong, 2×3 mm. Spores spherical, echinulate, brown, 8-13 μ . *Karst. Fung. Fenn.*, Exs., 570.

The specimen in the Kew Herbarium from Karsten is altogether white externally, and the spores coffee-colour, with a tinge of purple in the mass. Related to *P. pisocarpium*.

Amongst sand. Pudasjärvi (lat. $65\frac{1}{2}^{\circ}$).

P. microcarpum, *Cke. & Mass.*

Peridium subglobose, coarsely tuberculate, ochraceous brown; stout, short stem-like base, bright citrin. Peridiola small, angular, about 2 mm., septa very thin and fragile. Spores spherical, minutely warted, ochraceous, with a tinge of olive, 6-7 μ .

Related to *P. pisocarpium*, but distinct in the size of the peridiola and spores, and also in the colour of the latter. Peridium from $1\frac{1}{2}$ -2 in. diam.

Torvomba, Queensland.

P. crassipes, *D. C.; Voy.*, I., p. 8; *Flor. Fr.* vi., p. 103.

Peridium varying from spherical to clavate or subcylindrical, stem-like base, stout, often lacunose. Peridiola minute, oblong or polyhedral, about 2 mm., golden yellow, then ferruginous. Spores spherical, warted, coffee-colour, 9-12 μ . *Fries S. Myc.* iii., p. 53. *Krombh.*, Heft. 8, p. 18; t. lx., f. 1, 2. *Corda*, *Icon. Fung.* tom. v., p. 63; taf. iv., f. 41. *Winter*, *Krypt. Fl.*, p. 891. *Nees. Syst.*, p. 138; t. 13, f. 131. *Sturm.*, Heft. 34, t. 5. *Paulet*, *Icon. Champ.*, p. 149, pl. excix., f. 5, 6. *P. crassipes*, var. *clavatum*, *Deitr.*, *Deutsch. Fl.*, pl. 118. *Lycoperdon album*, *Mich. Nov. Gen.*, p. 49, t. 98, f. 1. *Scleroderma tinctorium*, *Pers. Syn. Fung.*, 152. *Lycoperdon capitatum*, *Batsch*. *Polypora crassipes*, b. *capitatum*, *Ficinus*, *Fl. Dresd.* ii., p. 306. *Exsicc.*, *Rabh. Fungi Eur.* 1074. *Thumen, Fungi Austr.* 15. *Desmaz. Crypt. France* (ser. i.) 2027.

Peridium at first pale ochraceous, becoming darker, 2-4 in. diam. Stem 4-6 in. long, 1-2 in. thick. Immersed in sand.

Europe, Australia.

P. turgidum, *Fr. Syst. Myc.*, Vol. iii., p. 53.

Peridium subcylindric or clavate, passing into a long stout lacunose, stem-like base, divided into thick rooting branches. Peridiola small, 2-3 mm., rounded, pallid. Spores spherical,

minutely echinulate, coffee-colour, 7-8 μ . *Krombh.*, Heft. 8, p. 19; taf. lx., f. 8. *Lycop. magnum*, &c., *Buxb.*, Cent. i., p. 37, t. 58. *Winter*, Krypt. Fl. (Pilze.), 891.

Peridium at first covered with an exceedingly fine arachnoid web, then smooth, and, like the stem, dark umber, or the latter yellowish towards the base. From four to six inches long. At first buried in sand.

Europe, Lower Carolina, New Jersey, Australia.

P. tuberosum, *Fr. Syst. Myc.*, III., p. 55.

Peridium subglobose or deformed, with a very short stem-like base, even, smooth. Peridiola large, angular, 3-4 mm., yellow, becoming brown. Spores globose, warted, dark cinnamon, 9-12 μ . *Krombh.*, Heft. 8, p. 20; t. lx., f. 10-12. *Winter*, Krypt. Fl., p. 890. *Lycoperdioides tuberosum*, &c., *Michx.* Gen. Pl., p. 219, t. 98, f. 2. (*Polysaccum conglomeratum*, *Fr. S. Myc.* iii., p. 55. *Lycoperdioides tuberosum*, &c., *Michx.* Gen. Pl., f. 3, is probably nothing more than a caespitose form of this species.) *Exsicc.*, Thumen, *Myc.* 11. *Thumen*, *Fungi Austr.* 830. *Rab. Fung. Eur.* 1073.

Peridium ochraceous, becoming darker, often irregular and depressed, point of attachment basal or lateral.

Europe; Australia.

P. marmoratum, *Berk.*, *Trans. Linn. Journ.*, XIII., p. 155.

Peridium subglobose, tapering into a more or less elongated stem-like base, dirty ochre, marbled with darker patches. Peridiola small, angular, about 1.5-2 mm. Spores spherical, rough, with very fine sinuous raised lines, brown, 7-8 μ . *Herb. Berk.* No. 4688.

Peridium 1-2 in. across, stem varying from $\frac{1}{2}$ -1 $\frac{1}{2}$ in. long.

Australia.

P. australe, *Cooke in Herb. Kew.*

Peridium subglobose, slightly narrowed below into a short, thick, stem-like base, or pyriform, rugulose, olivaceous-umber, sprinkled with yellow pruina. Peridiola small, 2-3 mm., polygonal, dissepiments very thin. Spores spherical, smooth, bright ochraceous brown, 5-6 μ . *Herb. Kewensis.*

Peridium about 2 in. across; stem $\frac{1}{2}$ in. long. 1 in. thick.

S.W. Australia.

SPECIES EXCLUDED.

P. herculeum, *Fr. S. M.*, III., p. 52.

From the description given by Pallas in *Russ. Reis.* i., 132, p. 553, is in all probability a species of *Podaxon*.

P. subarrhizum, *Fr. S. M.*, III., 54.

(= *P. arrhizum*, *Rab.*) appears to be a species of *Scleroderma*.

AUSTRALASIAN FUNGI.

BY M. C. COOKE.

All except the last four species were communicated by Baron F. von Mueller, K.C.M.G.

Agaricus (Amanita) illudens, *Cke. & Mass.*

Pileo convexo (1 unc.) ochraceo-flavido, verrucis inæqualibus, sparsis, latis, mox secedentibus, consperso, margine lævi; stipite gracili, fistuloso, æquali, annulo obsoleto; volva vaginali; lamellis liberis, postice attenuatis, candidis, acie serrulatis; sporis ovalibus, $8 \times 6 \mu$.

On the ground. Upper Yarra, Victoria; Harkaway Ranges, Victoria. (*C. French.*)

Pileus scarcely exceeding 1 inch; stem 2 inches long, 2-3 lines thick.

Agaricus (Lepiota) columbicolor, *Cke. & Mass.*

Pileo subcarnoso, convexo, obtusissime umbonato, furfuraceo, cæruleo-griseo (columbi color), stipite cylindrico, æquali, albido, deorsum ochraceo, tenui, farcto, demum fistuloso, glabro; annulo membranaceo-fugaci, lamellis liberis, ventricosis, confertis, albis; sporis ellipticis, $10-12 \times 5-6 \mu$.

On the ground. Lake Bonney. (*Miss Wehl., No. 26, with fig.*)

Pileus $\frac{3}{4}$ inch diam.; stem 2 in. long, 2 lines thick.

Agaricus (Lepiota) obclavatus, *Cke. & Mass.*

Pileo subcarnoso, convexo-applanato, vix umbonato, furfuraceo, rufo-fusco, disco obscuriori, carne rubente, stipite gracili, cylindrico, fistuloso, ad basin abrupte bulboso-incrassato, glabro, pallide carneo-fusco; annulo tenui, fugaci; lamellis confertis, angustis, liberis, albis, sporis ellipticis, hyalinis, $10-12 \times 6 \mu$.

On charred ground under gum tree, near Melbourne. (*Miss Wehl., No. 14, with fig.*)

Pileus 1 in. diam.; stem 3-4 in. long, 2-3 lines thick above, $\frac{1}{2}$ inch and more at the abruptly bulbous base.

Agaricus (Lepiota) echinodermatus, *Cke. & Mass.*

Flavidus. Pileo (1 unc. diam.) convexo-plano, verrucis erectis, conicis convergentibus densissime obsito, margine incurvo, velo appendiculato, stipite subæquali, gracili, tomentoso-squarroso, flavido (2 in. long, 2 lin. crass), annulo fugaci, vel ad marginem pilei appendiculato. Lamellis subliberis, approximatis, leviter adnatis, confertis, ventricosis, albis; sporis, $8 \times 6 \mu$.

Possibly on wood. New Caledonia. (*Hodgson.*)

Agaricus (Collybia) veluticeps, *Cke. & Mass.*

Pileo subcarnoso, convexo-expanso, velutino, hepatico; stipite brevi, æquali, sursum pallido, deorsum rufo-fusco, carne pallidiori; lamellis ventricosis, adnatis, subconfertis, albis; sporis, $8-10 \times 5 \mu$.

In fern gully. Lake Bonney. (*Wehl., No. 3, with fig.*)

Pileus 1 in.; stem 1 in. long, 2 lines thick.

Agaricus (Pleurotus) polychromus, *Cke. & Mass.*

Pileo carnosio, infundibuliformi, ochraceo-albo, demum sulphureo, purpureo vel fuligineo maculato, glabro, lævi; stipite subexcentrico, solido, curto, deorsum attenuato, albedo; lamellis longe decurrentibus, subconfertis, arcuatis, utrinque attenuatis, angustis, albidis.

On rotten wood (?). Melbourne. (*Wehl., No. 1.*)

Pileus 3-4 in. diam.; stem 1 in. long, $\frac{1}{2}$ in. thick.

Agaricus (Entoloma) læticolor, *Cke. & Mass.*

Pileo subcarnoso, convexo, demum plano, obtuso, lævi, nitido, amethystino, stipite æquali, tenni, subsolido, pallidiore, lamellis adnatis, subventricosis, vix confertis, roseis; sporis globosis, verrucosis, 12-14 μ diam.

On the ground in sandy soil, near Melbourne. (*Miss Wehl., No. 11, with fig.*)

Subcaespitose. Pileus scarcely exceeding an inch diam.; stem 2 in. long, 2 lines thick.

Agaricus (Entoloma) melaniceps, *Cke. & Mass.*

Pileo carnosio, compacto, convexo, obtuso, lævi, glabro, atrofuligineo; stipite solido, subæquali, brevi, glabro, pallido; lamellis rotundato-adnatis, pallido-griseus, demum incarnatis; sporis subglobosis, roseis, 10-12 μ .

On the ground. Near Melbourne. (*Miss Wehl., No. 41, with fig.*)

Pileus $1\frac{1}{2}$ -2 in.; stem 1 in. long, 3-4 lines thick.

Agaricus (Flammula) papuensis, *Cke. & Mass.*

Pileo compacto, convexo-plano, obtuso, vix umbonato, glabro, viscido, flavido, disco obscuriore, mox umbrino; stipite æquali, adscendente, solido, tomento flavido consperso; lamellis lanceolatis, adnatis, subdecurrentibus, cinnamomeis; sporis ellipticis (12 \times 6 μ).

On wood. New Guinea. (*Hartmann, No. 16.*)

Pileus about 2 inches; stem 2-3 inches long, $\frac{1}{4}$ inch thick. Allied to *A. sapineus*.

Agaricus (Naucoria) fraternus, *Cke. & Mass.*

Cæspitosus. Pileo convexo, depresso, umbilicato, lævi, glabro, fusco-ferrugineo stipite elongato, tenni, ascendente, fistuloso, glabro, concolori; lamellis subdistantibus, latis, adnatis, ferrugineis; sporis ellipticis, 10 \times 6 μ .

On logs. Port Phillip. (*French, No. 1, with fig.*)

Pileus about $\frac{1}{2}$ in.; stem 1-2 in. long, 1 line thick.

Hygrophorus (Camarophyllus) gigasporus, *Cke. & Mass.*

Pileo carnosio, tenni, e convexo expanso, umbonato, fuligineo, lævi, glabro, viscido, nitente, stipite stricto, elongato, deorsum leviter incrassato, fibrilloso, solido, lamellis subdistantibus, adnatis, dente decurrentibus, latis, albidis; sporis ovalibus, 20 \times 12-14 μ .

On horse dung and around it. Port Phillip. (*French, No. 8, with fig.*)

Pileus 2-2½ in. diam. ; stem 4.5 in. long, ½ in. thick below, little more than half as thick above.

Russula (*Furcata*) *australiensis*, Cke. & Mass.

Aeris. Pileo carnosio, firmo, e convexo plano, rubro, pellicula tenui, adnata, arido, margine lævi, stipite æquali, farcto, cavove, stramineo, lamellis utrinque attenuatis, vix confertis, postice furcatis, adnexis, dente decurrentibus, citrinis ; sporis globosis, asperulis, 10 μ .

On the ground. Port Phillip. (*French, Nos. 5, 15, 16, with figs.*)

Pileus about 2 in. diam. ; stem 2 in. long, scarce half an inch thick.

Cantharellus *politus*, Cke. & Mass.

Pileo carnosulo, convexo, depresso, demum subinfundibuliformi, glabro, lævi, viscido, eximie nitido, castaneo ; stipite sub-æquali, farcto, intus extusque pallido, lamellis crassis, subdistantibus, ramosis, pallido-cinereis ; sporis cylindræcis, 14-15 \times 4 μ .

On the ground in fern gully. Near Melbourne. (*Miss Wehl., No. 27, with fig.*)

Pileus 1-1½ inch ; stem 1 inch long, 3-4 lines thick.

Boletus (*Viscipelles*) *australis*, Cke. & Mass.

Pileo convexo, pulvinato, viscoso, umbrino, stipite glabro, deorsum attenuato, vel fusiformi-radicato, carneo, carne pallide roseo, cærulescente ; tubulis adnatis, virescentibus, poris hexagonis, æqualibus, majusculis, sulphureis ; sporis cylindricis, 20 \times 5-6 μ .

On the ground. Near Melbourne. (*Wehl., No. 4, with fig.*)

Pileus 2-3 in. ; stem 2-3 in. long, ½ to ¾ in. thick.

Boletus *prunicolor*, Cke. & Mass.

Pileo pulvinato, molli, viscoso, prunicolori vel purpurascente, lævi ; stipite inæquali, ventricosio, clavato, vel clavato-bulboso, pallido, lævi ; tubulis postice brevissimus, vix liberis, poris rotundatis, minutis, simplicibus, pallidis ; sporis elongato-ellipticis, 18-20 \times 6, olivaceis.

On the ground. Port Phillip. (*French, No. 7, with fig.*)

Pileus about 2 in. diam. ; stem 3 in. long, ½-¾ in. thick ; "colour dark mauve on the top."

Hydnum (*Mesopus*) *ambustum*, Cke. & Mass.

Pileo carnosio-membranaceo, convexo-plano, glabro, testaceo-nigricante (½-¾ unc. lat.). Stipite erecto, gracili, æquali, glabro, pallidior (1 unc. long), sub-cæspitoso, sæpe radicante, aculeis æqualibus, acutis, albis ; sporis globosis (8-10 μ).

On sandy soil. Harkaway Range, Victoria.

It belongs to the section *Carnosa*, and has a scorched appearance when dry, the margin of the pileus being testaceous, whilst towards the disc it becomes almost black.

Clavaria (Holocoryne) aurantia, Cke. & Mass.

Simplicissima, stricta, aurantiaca, clavato-incrassata, glabra, deorsum in stipitem æqualem attenuata; sporis subglobosis, minutis.

On the ground. Harkaway Range, Victoria. (*C. French, Sen.*)

From 2 to 3 inches high, of which about one half is occupied by the stem.

Ombrophila radicata, Phillips.

Solitaria vel cæspitosa. Cupulis stipitatis, subgelatinosis ($1\frac{1}{2}$ -5 lin. diam.), hymenio depresso, rugoso, hepatico; margine tenui, integro, sursum glabro, rugoso, incarnato; stipite elongato, deorsum attenuato (4-6 lin.) radicato, asci cylindraceo-clavato; sporidiis 8, ellipticis, biguttulatis, hyalinis ($6-10 \times 4-5$) paraphysibus ramosis, clavatis ($4-7 \mu$ diam.) ad apices fusco-umbrinis.

Stoney Range, Melbourne. (*Miss Wehl., No. 2, with fig.*)

It has considerable resemblance to *O. rudis*, B., but differs in its sporidia, paraphyses, and rooting habit.

Bovista ovalispora, Cke. & Mass.

Subglobosa, sessilis; cortice tenui, albo vel subochraceo, subpersistente. Peridio tenui, flaccido, glabro, cinereo, ore irregulari; capillitio sporisque umbrino. Hyphis ($12-16 \mu$ diam.) vage ramosis, apicibus attenuatis, pallide umbrinis; sporis ovalibus ($6 \times 4\frac{1}{2} \mu$) fusco-umbrinis, pedicellatis. Episporio crassiusculo, hyalino, pedicellis elongatis, crassis, hyalinis.

On the ground. New Zealand, S. Carolina (U.S.), Kew Gardens (G.B.)

Mycenastrum olivaceum, Cke. & Mass.

Peridio subgloboso (3 unc.) sessili, rigido, in lobulis acutis triangularis (5-6) deliscente, extus glabro, lævi, cinereo-lividi. Sporis capillitioque olivaceis. Hyphis $15-20 \mu$ crassis, irregulariter ramosis, ubique spinulosis; sporis sphaericis, asperulis, 15μ diam.

On the ground. Queensland.

Peridium lead-colour above, dirty white below, with a tinge of rose. Spores of the same size as in *M. corium*, which in the latter are purple and more coarsely warted.

Xylaria ellipsospora, Cke. & Mass.

Capitulum clavatum, obtusum ($\frac{1}{2} \times \frac{1}{4}$ in.), atrum, stipite abbreviato, glabro, peritheciis immersis, nec prominulis, ostioliis minutis, punctiformibus. Ascis cylindraceis, sporidiis ellipticis, atrobrunneis, opacis, $16-18 \times 8 \mu$.

On rotten wood. Deep gulley, Mount Wellington, Tasmania.

Tubercularia leguminum, Cke. & Mass.

Minuta, erumpens, carnea, sporodochiis sessilibus, irregularibus, subconfluentibus, sporophoris brevibus, rectis, conidiis elongato-ellipsoideis, plerumque leniter curvulis, $20 \times 5 \mu$.

On legumes of *Cassia*. Brisbane. (*F. M. Bailey, No. 580.*)

BRITISH PYRENOAMYCETES.

By G. MASSEE.

(Continued from p. 14.)

Fam. 8. CUCURBITARIÆ. Perithecia cæspitose or gregarious.

GEN. 1. **NITSCHKIA**, *Othk.* Perithecia black, or seated on a thin white villous stratum. Sporidia sausage-shaped, hyaline.

N. cupularis, *Pers.*, *Sacc. Syll.* 377 ; *Hdbk.* 2524.

On sloe. Hampstead, King's Cliffe, Kew, Batheaston, Botanic Garden, Edinboro'.

GEN. 2. **GIBBERA**, *Fr.*, *Sacc. Syll.* I., p. 599. Perithecia setulose, papillate.

* *Sporidia uniseptate, hyaline.*

G. vaccinii, *Fr.*, *Sacc. Syll.* 2338 ; *Hdbk.* 2525.

On *Vaccinium vitis-idaea*. Stiperstones.

GEN. 3. **OTTHIA**, *Ntke.*, *Sacc. Syll.* I., 735. Perithecia cæspitose, erumpent then superficial, carbonaceous, scarcely papillate.

* *Sporidia uniseptate, coloured.*

O. pruni, *Fckl.*, *Sacc. Syll.* 2783.

On sloe. Eastbourne.

O. populina, *Pers.*, *Sacc. Syll.* 2785.

On poplar. Kew Gardens.

O. syringæ, *Fr.*, *Sacc. Syll.* 2791.

On lilac.

GEN. 4. **CUCURBITARIA**, *Gray*, *Sacc. Syll.* II., 307. Perithecia in erumpent tufts, carbonaceous, typically rugulose.

* **MELANOMMA**. *Sporidia triseptate, brown.*

C. Aspegrenii, *Fckl.*, *Sacc. Syll.* 3229 ; *Hdbk.* 2606.

On blackthorn. Orton Wood.

C. dioica, *Moug.*, *Sacc. Syll.* 2911.

On *Acer*. Shere, Dupplin.

C. conglobata, *Fr.*, *Sacc. Syll.* 3950.

On *Corylus*. Appin.

** **DICTYOSPORA**. *Sporidia muriform, coloured.*

C. berberidis (*P.*), *Sacc. Syll.* 3935 ; *Hdbk.* 2520.

On dead branches of barberry. Forden, Edinboro', Shrewsbury, Hayes, Scarboro'.

- C. laburni*, *Pers.*, *Sacc. Syll.* 3937 ; *Hdbk.* 2516.
On dead branches of laburnum. Oswestry, Scarboro', King's Cliffe, Carlisle, Oxford, Shrewsbury, Twycross.
- C. elongata*, *Fr.*, *Sacc. Syll.* 3938 ; *Hdbk.* 2517.
On *Robinia*. Swanscombe.
On laburnum. Elton, Norths.
- C. spartii*, *N.*, *Sacc. Syll.* 3948 ; *Hdbk.* 2518.
On *Sarothamnus*. Scarboro', Darent, Lowes-Water, Cumberland.
- C. lauro-cerasi*, *Ph. & Pl.*, *Sacc. Syll.* 3953.
On cherry laurel. Forres, N.B.
- C. rhamni*, *N.*, *Sacc. Syll.* 3957.
On *Rhamnus frangula*. York, Lynn.
- C. naucosa*, *Fr.*, *Sacc. Syll.* 3959.
On *Ulmus campestris*.
- C. euonymi*, *Cke.*, *Sacc. Syll.* 3976.
On *Euonymus*. Mickleham.
- C. dulcamaræ*, *Fr.*, *Sacc. Syll.* 3979.
On *Solanum dulcamara*. Lynn.
- C. ribis*, *Niessl.*, *Sacc. Syll.* 3985.
On *Ribes*. Isleworth.
- C. Aspegrenii*, *Ces.*, *Sacc. Syll.* 3987.
On cherry. Kew.

Fam. 9. SUPERFICIALES, *Fr.* Perithecia discrete, superficial, or nearly so.

Sub-Fam. 1. BYSSISEDÆ. Perithecia seated on a byssoid stroma.

GEN. 1. **BYSSOSPHERIA**, *Cooke, Grev.* VII., 84. Perithecia smooth, emerging from a more or less distinct byssoid stroma.

* **CÆLOSPHERIA**. *Sporidia hyaline, continuous.*

- B. tristis*, *Tode.*, *Sacc. Syll.* 378 ; *Hdbk.* 2554.
On wood. Batheaston, Eastbourne, Bristol.

** **EU-ROSELLINIA**. *Sporidia continuous, brown.*

- B. aquila*, *Fr.*, *Sacc. Syll.* 916 ; *Hdbk.* 2550.
Common. On wood and branches.
- B. thelena*, *Fr.*, *Sacc. Syll.* 918 ; *Hdbk.* 2549.
On wood, &c. Batheaston, Lynn, Scarboro'.
- B. Desmazierii*, *B. & Br.*, *Sacc. Syll.* 922 ; *Hdbk.* 2551.
On wood. King's Cliffe, Northampton.

*** **MELANOPSAMMA**. *Sporidia uniseptate, hyaline.*

- B. investans*, *Cooke, Sacc. Syll.* 2333.
On branches. Shere.

*** HERPOTRICHIA. *Sporidia triseptate, hyaline.*

B. innumera, *B. & Br.*, *Sacc. Syll.* 3211; *Hdbk.* 2578.

On wood. Somerset, Kew, Hereford, Batheaston, Carlisle, Lynn, Orton Wood.

B. callimorpha, *Mont. Sacc.*, *Syll.* 3212 (= *ruborum*, *Lib.*, *Sacc. Syll.* 2249); *Hdbk.* 2571.

On rose. Highgate, Twycross, Orton Wood, N. Wootton.

*** MELANOMMA. *Sporidia 2-3 septate, brown.*

B. epochnii, *B. & Br.*, *Sacc. Syll.* 3245; *Hdbk.* 2592.

On *Corticium*. Bath, Lynn.

*** CHÆTOSPHÆRIA. *Sporidia 2-5 septate.*

B. phæostroma, *Mont.*, *Sacc. Syll.* 3200; *Hdbk.* 2552.

On wood. Colwyn Bay, Carlisle, Batheaston, Lynn, Twycross, Scarboro', Ringmer.

GEN. 2. **CHÆTOSPHÆRIA**, *Tul.* Perithecia gregarious, villous, seated on a byssoid subiculum.

* *Sporidia 2-5 septate, coloured.*

C. cupulifera, *B. & Br.*, *Sacc. Syll.* 3204.

On elm wood. Langridge, Somerset.

C. pileo-ferruginea, *Crouan*, *Sacc. Syll.* 3216.

On stems and roots of *Calluna vulgaris*. Carlisle.

C. clavariarum (*Desm.*), *Sacc. Syll.* 837; *Hdbk.* 2061.

On *Clavaria*. Rudloe, Wilts.

GEN. 3. **LASIOSPHÆRIA**. Perithecia superficial, setulose; sporidia hyaline or subhyaline.

* TRICHOSPHÆRIA. *Sporidia continuous, hyaline.*

L. exilis, *A. & S.*, *Sacc. Syll.* 379; *Hdbk.* 2566.

On pine twigs. Wraxall.

L. pilosa, *Pers.*, *Sacc. Syll.* 1741 and 6020; *Hdbk.* 2573.

On fir-cones. East Bergholt.

L. superficialis, *Curr.*, *Sacc. Syll.* 1744; *Hdbk.* 2567.

On pine wood. Kent.

L. cæsia, *Curr.*, *Sacc. Syll.* 1746; *Hdbk.* 2563.

On rotten wood. Appin.

** LEPTOSPORA. *Sporidia continuous, elongated, hyaline.*

L. ovina, *Pers.*, *Sacc. Syll.* 3568; *Hdbk.* 2557.

On dead wood. Batheaston, Shrewsbury, Perth, Scarboro', Epping Forest, Lynn, Forden.

L. felina, *Fekl.*, *Sacc. Syll.* 3571.

On larch. Batheaston.

L. strigosa, A. & S., *Sacc. Syll.* 3574 ; *Hdbk.* 2565.

On wood. Gopsall.

L. scabra, Curr., *Sacc. Syll.* 3580 ; *Hdbk.* 2570.

On furze. Weybridge.

L. sulphurella, *Sacc. Syll.* 3581.

On wood. Kew.

* * *ERIOSPHÆRIA*. *Sporidia uniseptate, hyaline.*

L. membranacea, B. & Br., *Sacc. Syll.* 2332.

On wood. Langridge.

L. inæqualis, Grove, *Sacc. Syll.* 6537.

On rotten wood. Burnt Green.

** *EU-LASIOSPHÆRIA*. *Sporidia septate.*

† *Sporidia septate, hyaline.*

L. hirsuta, Fr., *Sacc. Syll.* 3538 ; *Hdbk.* 2559.

On wood. Perth, Abinger, Surrey, Pickhurst Green.

L. helicoma, P. & P., *Sacc. Syll.* 3542.

On chips. Brandon, Lynn.

L. canescens, Pers., *Sacc. Syll.* 3547 ; *Hdbk.* 2564.

On dead wood. Hampstead, Gopsall, Twycross.

†† *Sporidia septate, becoming brownish.*

L. hispida, Tode., *Sacc. Syll.* 3549 ; *Hdbk.* 2560.

On wood. Shrewsbury, Batheaston, Wilts.

L. racodium, Pers., *Sacc. Syll.* 3550 ; *Hdbk.* 2553.

On wood. Twycross, Scarboro', Milton.

L. mutabilis, Pers., *Sacc. Syll.* 3558 ; *Hdbk.* 2569.

On wood. King's Cliffe.

L. ambigua, *Sacc. Syll.* 3560 (= *carbonaria*, Phil. & Plow.).

On burnt ground. Shrewsbury.

** *ENCHNOSPHERIA*. *Sporidia multiseptate, hyaline.*

L. biformis, Pers., *Sacc. Syll.* 3585 ; *Hdbk.* 2555.

On rotten wood, and on the ground.

L. macrotricha, B. & Br., *Sacc. Syll.* 3623 ; *Hdbk.* 2572.

On *Carax*. Spye Park.

GEN. 4. **CONIOCHÆTA**, *Sacc. l.* 269. Perithecia hispid, sporidia coloured.

* *Sporidia continuous, brown.*

C. ligniaria, Grev., *Sacc. Syll.* 991.

On wood. Bath, Kent, Elmstead, Highgate, Scotland.

** *HYPOCOPRA*. *Sporidia brown, with a hyaline appendage.*

C. capillifera, Curr., *Sacc. Syll.* 895 ; *Hdbk.* 2561.

On *Corticium* and subjacent wood. Kent.

C. brassicæ, Klot., *Sacc. Syll.* 859; *Hdbk.* 2558.

On dead cabbage stalks. Batheaston, Forden.

*** PLEOSPHERIA. *Sporidia muriform*, coloured.

C. sexdecemspora, Cooke, *Sac. Syll.* 3872; *Hdbk.* 2574.

On branches. Shere.

GEN. 5. **VENTURIA**, *Not., Sacc. Syll.* I., 586. Perithecia setulose, membranaceous, generally growing on leaves. Sporidia oblong, hyaline.

* *Sporidia uniseptate*.

V. chlorospora, Ces., *Sacc. Syll.* 2283.

On willow leaves. Shere.

V. ditricha, Fr., *Sacc. Syll.* 2289.

On alder leaves. Darenth, Lynn.

V. inæqualis, Cooke, *Sacc. Syll.* 2290.

On leaves of *Pyrus malus*. Shere, Forden.

On willow leaves. Darenth.

V. Kunzei, *Sacc. Syll.* 2291 (= *chætomium*, Kze.).

On bramble leaves. N. Wootton.

V. ilicifolia, Cooke, *Sacc. Syll.* 2293; *Hdbk.* 2782.

On holly leaves. Shere, Thirsk, Epping.

V. Dickiei, B. & Br., *Sacc. Syll.* 2299; *Hdbk.* 2778.

On leaves of *Linnæa borealis*. Aberdeen.

V. myrtilli, Cooke, *Sacc. Syll.* 2301; *Hdbk.* 2781.

On semi-putrid leaves of *Vaccinium myrtillus*. Shere, Surrey.

V. atramentaria, Cooke, *Sacc. Syll.* 2303.

On *Vaccinium uliginosum*. Perth, Braemar.

V. barbula, Cooke, *Sacc. Syll.* 2304; *Hdbk.* 2784.

On pine bark. Wraxall, Somerset.

V. Johnstoni, B. & Br., *Sacc. Syll.* 2309; *Hdbk.* 2420.

On *Epilobium angustifolium*. Dinmore, Berwick.

V. glomerata, Cooke, *Sacc. Syll.* 2310 (= *robergei*, Desm., = *circinans*, Fr., *Sacc. Syll.* 2311).

On geranium. Barnet, Eastbourne, King's Lynn.

V. alchemillæ, Grer., *Sacc. Syll.* 2314; *Hdbk.* 2796.

On *Alchemilla vulgaris*. Penicuik, Perth, Forres.

On *A. arvensis*. England.

V. potentillæ, Fries, *Sacc. Syll.* 2316; *Hdbk.* 2795.

On living leaves of *Potentilla reptans*. Darenth, Kent.

On *P. anserina*. Forden, Highgate, Pontrilas.

V. exosporioides, Desm., *Sacc. Syll.* 2319. *Hdbk.* 2779.

On *Carex*. Spye Park, Shrewsbury.

V. eres, B. & Br., *Sacc. Syll.* 2320; *Hdbk.* 2780.

On *Carex*. Spye Park.

*** VENTURIOLA. *Sporidia continuous*.

V. integra, Cooke, *Sacc. Syll.* 2322; *Hdbk.* 2783.

On leaves of *Corylus avellana*. Shere.

GEN. 6. **CHÆTOMIUM**, Kunze, Sacc. Syll. I., 220. Perithecia submembranaceous, fragile, strigose. Asci soon dissolved.

Sporidia continuous, brown.

C. elatum, Kunze, Sacc. Syll. 793; *Hdbk.* 1932 (= *comatum*, Sacc.).

On straw, paper, &c. Common.

C. atrum, Link, Sacc. Syll. 795.

On *Heracleum*. Shere, Swanscombe.

C. indicum, Corda, Sacc. Syll. 797.

On paper. Whitehall, London.

C. chartarum, Ehr., Sacc. Syll. 800; *Hdbk.* 1933.

On paper. Stibbington, Hants.

C. murorum, Corda, Sacc. Syll. 803; *Hdbk.* 1935.

On plaster. Edinboro'.

C. funiculum, Cooke, Sacc. Syll. 815.

On twine. British Museum.

C. griseum, Cooke, Sacc. Syll. 817.

On dead leaves. Highgate.

FUNGUS FORAYS, 1887.

On account of the dryness of the summer and autumn the Foray of the Essex Field Club was postponed from the 1st of October until the end of the month. A visit to Epping Forest on the 1st fully justified this decision, for not more than seven or eight common species could be found.

WOOLHOPE FIELD CLUB.—On Monday, October 3rd, some of the usual visitors reached Speech House, Forest of Dean, where they were met on the following morning by a contingent of some twenty-three persons from Hereford. Many of the old faces were present, and the route taken to Five Beeches was fairly successful. Fungi were nowhere plentiful, but the locality was new, the weather was fine, and the scenery delightful. After dining together at Speech House, some of the party returned to Hereford, whilst others remained for the following day. The evening was fully occupied with an examination of the spoils of the day. Wednesday, 5th October, was even more successful than the previous day, the route selected being Park End, which was a damper side of the Forest, and was certainly the best spot of any which we have had the fortune to visit during the present year. Of the new or interesting species found during the two days' excursions, may be named the ringless form of *Cortinarius biformis*, Fr., a singular *Cortinarius* much resembling an *Inocybe*; a new species of *Cortinarius* which has been named *C. bicolor*; a very fetid *Hebeloma* with broad gills, described in the present number as *Ag.*

(*Hebeloma*) *nauseosus* ; several other interesting species of *Cortinarius*, and some few other species of *Agaricus*, *Lactarius*, and *Russula*, sufficient to keep up the interest, although not particularly rare. The Thursday excursion was devoted to Dinmore, but nothing of particular interest was found, and after this came the inevitable club dinner, ending with a soirée at the house of Mr. Cam, and a friendly gossip amongst the visitors and friends. Friday, the 7th, completed the Hereford week with an excursion to Ledbury and Eastnor Park, but fungi were nowhere to be found, so that the excursionists had to content themselves with an excellent dinner at Mr. Piper's, and then make the best of their way home.

HERTFORDSHIRE NATURAL HISTORY SOCIETY.—The Annual Fungus Excursion was held on Thursday afternoon, 13th October, in the neighbourhood of Broxbourne. Although the weather was not all that could have been desired, yet the finding and determination of about 75 species during the afternoon must, under all circumstances, be considered as entirely satisfactory. Amongst the most interesting spoils was what is believed to be the typical *Cortinarius quadricolor*, and *Cortinarius microcylus*, the latter new to Britain. In all about 30 species were added to the county lists.

HACKNEY NATURAL HISTORY SOCIETY.—The Annual Fungus Field Day in Epping Forest was taken on Saturday, October 15th. Although there was still a great dearth of fungi in the Forest, it was found possible to complete a list of upwards of 100 species seen during the excursion, and of these about half a dozen were additions to the Flora of Essex, namely, *Agaricus* (*Stropharia*) *merdarius*, Fr. ; *Agaricus* (*Collybia*) *ocellatus*, Fr. ; *Agaricus* (*Mycena*) *roridus*, Fr. ; *Agaricus* (*Hypholoma*) *epixanthus*, Fr. ; *Agaricus* (*Pleurotus*) *limpidus*, Fr. ; *Polyporus* (*Fomes*) *fraxineus*, Fr. ; and the variety *Mulleri* of *Agaricus* (*Pholiota*) *squarrosus*, Fr.

SOCIÉTÉ BOTANIQUE DE FRANCE.—Canon du Port and Mr. T. Howse visited the Vosges before attending the Mycological Congress in Paris. Unfortunately a heavy fall of snow prevented them doing much ; after the first day the ground was completely covered. The most interesting species found are reported to have been *Russula mustelina*, Fr. ; *Russula rubra*, Fr. ; *Cortinarius albobolaceus*, Fr. ; one supposed to be *Cortinarius fulvobrunneus*, Fr. ; *Hygrophorus tephroleucus*, Fr. ; *Hygrophorus pustulatus*, Fr.

An exhibition of Fungi was held in Paris, at the rooms of the Société Botanique, but "owing to the dryness of the season," we are informed, "there were fewer fungi of interest than might have been expected." Amongst these were *Hygrophorus crubescens*, Fr. ; *Hygrophorus pudorinus*, Fr. ; *Agaricus* (*Tricholoma*) *bufonius*, Fr. ; *Clathrus cancellatus*, Fr. (immature) ; *Agaricus* (*Armillaria*) *bulbiger*, Fr. ; *Agaricus* (*Flammula*) *gunmosus*, Fr. ; *Agaricus* (*Pleurotus*) *mastrucatus*, Fr. ; *Agaricus* (*Pleurotus*) *nidulans*,

Fr.; *Polyporus croceus*; *Polyporus leucomelas*; *P. Clavaria juncea*, Fr.; and *Queletia mirabilis*, Fr.; from Normandy, *Lentinus degener*, Fr.; *Agaricus (Pholiota) destruens*, Fr.; *Cortinarius fulmineus*, Fr.

The first excursion was to the Forest of Herblay, but the ground was so dry that but few species were found. *Agaricus (Pholiota) caperatus* was abundant. By far the best excursion was to Pierrefonds for the Forest of Compiègne. The most interesting finds were: *Agaricus (Lepiota) Friesii*; *Agaricus (Nolanea) proletarius*, Fr.; *Agaricus (Mycena) collaratus*, Fr.; *Agaricus (Mycena) pelianthinus*; *Agaricus (Tricholoma) lascivus*, Fr.; *Marasmius fusco-purpureus*, Fr.; *Marasmius globularis*, Fr.; *Marasmius prasiosmus*, Fr.

The remainder of the time (during the week ending October 22nd) was devoted to the Forest of Fontainebleau. The following species are reported to have been observed, with many others of less interest: *Cortinarius dibaphus*, Fr.; *Cortinarius rufo-olivaceus*, Fr.; *Cortinarius anfractus*, Fr.; *Ag. (Collybia) longipes*, Fr.; *Ag. (Armillaria) robustus*, Fr.; *Ag. (Hebeloma) strophosus*, Fr.; *Ag. (Tricholoma) colossus*, Fr.; *Merulius radiosus*, Fr.; *Hygrophorus olivaceo-albus*, Fr.; *Polyporus croceus*, Fr. At a banquet given to the English visitors by M. de Seynes, Canon du Port read a letter from the President of the Woolhope Club, expressing a desire that French Mycologists should again visit Hereford. The visitors from England were Messrs. Du Port, Phillips, Plowright, and Howse. Amongst the French mycologists present were M. de Seynes, Cornu, Roze, Cintract, Patouillard, Richon, le Breton, Planchon, Boudier, Mougeot, and Dr. Quelet.

HAMPSHIRE FIELD CLUB.—The first Fungus Foray of this Club in the New Forest was held at Lyndhurst, on October 20th and 21st, where M. C. Cooke, G. Massee, Rev. W. L. Eyre, and several local naturalists spent together two very enjoyable days in the forest, collecting and determining about 120 species. A detailed account, from the popular side, was given in the "Hampshire Independent" of October 22nd, with a list of the species found. The dry weather had exerted strong influence in the dry places of the forest where the soil is light, and indeed moist places were rarely encountered. Nevertheless, *Cortinarius orichalceus* was again found, and several other Fungi of interest, such as *Boletus pachypus*, *Boletus variegatus*, *Russula expallens*, *Boletus duriusculus*, *Sparassis crispa*, *Hygrophorus discoides*, &c., but nothing really new.

TUNBRIDGE WELLS NATURAL HISTORY SOCIETY held a Fungus Foray in the neighbourhood of Tunbridge Wells on Wednesday, October 25th, and an Exhibition on the following day. Considering all things, there was an excellent show, for which the Society was largely indebted to the zeal and energy of Dr. Abbott and one or two fungus-hunting members. Nothing absolutely new or rare was collected, but the methodical arrange-

ment, and public exhibition, of the well-labelled specimens throughout the day made up for the absence of a large number of species, by turning to the best account those which were obtained.

ESSEX FIELD CLUB.—The Annual Foray of two days followed the precedent of previous years. On October 28th and 29th Forays were made in all directions from Buckhurst Hill into the Forest, the first day chiefly in the part north of Epping, and on the second day around Monk's Woods, High Beach, &c. Two more splendid days could hardly have been selected as far as weather was concerned, but the results of the dry season were lamentably present everywhere. The additions made to the Essex lists were few, but not without interest. *Cortinarius brunneus*, Fr., of which this typical form has, perhaps, not been found in Britain, certainly not recorded, since the time of Withering; the other additions to the local flora were: *Agaricus (Clitocybe) catinus*, Fr.; *Cortinarius hemitrichus*, Fr.; *Cortinarius dolabratus*, Fr.; *Cortinarius torvus*, Fr.; *Hygrophorus russo-coriaceus*, B. & B.; and *Sphærobolus stellatus*, Fr. Tea, exhibition of specimens collected duly named and arranged, and a short evening meeting, with a report by M. C. Cooke on the results of the Foray, closed the last of the Forays of 1887.

NEW BRITISH FUNGI.

BY M. C. COOKE.

(Continued from Vol. XV., p. 11.)

Agaricus (Lepiota) Friesii, Lasch. Linn. III., No. 9.

Pileus fleshy, soft, torn into tomentose adpressed scales. Stem hollow, with a web-like medulla, somewhat bulbous, squamose, ring superior, pendulous, equal. Gills rather remote, linear, much crowded, branched.—*Fries Hym. Eur.* 31.

In a garden. Tanbridge Wells.

Agaricus (Mycena) flavipes, Quelet. Jura. II., t. 1, f. 4.

Pileus membranaceous, campanulate, striate, diaphanous, smooth, violet or purplish pink, disc becoming brownish. Stem tough, shining, pellucid, yellow, villous at the base. Gills unciniate, adnate, connected by veins, distant, white, then rosy flesh-colour. Odour raphanoid. Spores $7 \times 4 \mu$.

On stumps. Whitby, Yorks.

Agaricus (Pleurotus) sapidus, Kalchb. Icon. t. 8, f. 1.

Cæspitose. Pileus fleshy, somewhat excentric, deformed, smooth, depressed in the centre. Stem solid, connate at the base, smooth, white. Gills decurrent, rather distant, white. Spores $10 \times 4.5 \mu$.

On elm trunks. Isleworth, Kew, Morpeth, and other places.

Pileus white or brownish, flesh always white.

Agaricus (Clitopilus) straminipes, Massee.

Pileus thin, submembranaceous, fragile, convex then expanded, and depressed, whitish, even, rather shining (1-2 in.). Stem equal, hollow, smooth, often compressed, straw-coloured below, sprinkled with white meal above (2 in. long, 2 lines thick.) Gills scarcely crowded, shortly decurrent, whitish, then rosy. Spores irregularly globose, nodulose pink. 10-12 μ .

On the ground. Carlisle. (Dr. Carlyle.)

Agaricus (Hebeloma) nauseosus, Cooke.

Fœtid. Pileus convex, gibbous, more or less expanded, even, smooth, viscid, ochrey-white (1-1½ inch across). Stem equal, or slightly attenuated below, of the same colour, mealy above, faintly striate downwards, and in decay turning black at the base, solid. Gills ventricose, sinuate behind, very broad, rather distant, pallid, then clay-coloured, at length ferruginous. Spores large, attenuated towards each end, 20 \times 10 μ .

On the ground in mixed woods. Park End, Forest of Dean ; near Bristol.

This is evidently distinct from *A. capnioccephalus* and *A. ischnostylus*. The odour is very strong and abominable, especially after being kept for a night in a box.

Coprinus soboliferus, Fries Hym. Eur. 322.

Pileus submembranaceous, ovate then expanded, truncate, spotted with scales, dirty white. Stem stuffed, rather ventricose, tuberous at the base, ring fugacious. Gills free, ventricose, pallid, becoming black. Spores 18-20 \times 8 μ .—*Cooke Illus. t. 848. Ag. costatus*, Kromb. t. 4, f. 1, 2.

At the base of elm trunk. Ealing Churchyard ; Forest of Dean.

Perhaps only a variety of *C. atramentarius*, but the spores are nearly twice as large.

Cortinarius (Phlegmacium) herpeticus, Fr. Hym. Eur. 349.

Pileus fleshy, equal, somewhat spotted, viscid, disc becoming pale, flesh violaceous then whitish. Stem stuffed, firm, fibrillose, dirty pallid, marginate-bulbous at the base. Gills subadnate, violaceous-umber, then dingy olive. Spores 10 \times 6.—*Cooke Illus. t. 849.*

In woods. Near Carlisle. (Dr. Carlyle.)

Stem at first short, then 2-3 in. long, hard, but spongy within, and at length hollow at the apex. Pileus even, rather viscid, olive, then dingy tan-colour, 3 in. broad. Gills 2-3 lines broad.

Cortinarius (Dermocybe) lepidopus, Cooke.

Pileus fleshy, smooth, even, rather thin, convex then expanded, gibbous (1-2 in.), umber, with a tinge of violet near the margin, becoming rufescent at the disc, flesh whitish, with a darker line near the gills. Stem (3 in. long) attenuated upwards, becoming hollow when old, violet at the apex, dirty white below, with concentric fibrillose darker bands, flesh with a pale lilac tinge above and dirty white below. Veil whitish, with a tinge of violet. Gills adnate, rather crowded, thin, violet, then cinnamon. Spores

ovate, sometimes almost globose, with an apiculus $9 \times 6 \mu$.—*Cooke Illus. t.* 850.

In heathy ground. Epping Forest, near Monk's Wood (1882) ; near Carlisle (1887) ; Scarborough.

Colour of the pileus rather variable in the tint of brown. Allied to *C. anomalus*, but resembling *C. spilomeus* in the banded stem, although less distinct, and of a different colour. The specific name is derived from this character of the stem, which is unusual in *Dermocybe*.

Cortinarius (Telamonia) biformis, *Fr. Hym. Eur.* 383.

Pileus thin, conic-campanulate then expanded, smooth, shining, ferruginous-bay, with a prominent fleshy umbo. Stem stuffed, rigid, attenuated downwards, fibrillose-striate, paler, with an oblique white ring (which is sometimes obsolete). Gills adnate, rather crowded, crenulate, cinnamon.—*Cooke Illus. t.* 869.

In mixed woods. Park End, Forest of Dean. Oct., 1887.

Pileus $1\frac{1}{2}$ -3 in. diam. Stem 2-4 in. long, 3-4 lines thick.

This is the form without manifest ring mentioned by Fries. It approaches a diminutive form of *C. brunneus*.

Cortinarius (Telamonia) nitrosus, *Cooke*.

Stinking. Pileus fleshy, rather thin, obtuse, convex then expanded (2-3 in.), undulate at the margin, fawn-colour or tawny, darker and brownish at the disc, soon breaking up into minute, somewhat concentric darker scales. Stem short, stout, solid, ochraceous, darker at base, nearly equal (2-3 in long, $\frac{1}{2}$ in. thick), paler than the pileus, marked below with concentric darker squamose bands. Gills rather broad, somewhat distant, emarginate, violet, then watery cinnamon. Spores elliptical, $12 \times 4 \mu$.—*Cooke Illus. t.* 837.

In mixed woods, near Bristol. (C. Bucknall.)

Cortinarius (Telamonia) rubellus, *Cooke*.

Pileus fleshy, campanulate then expanded, rufous-orange, darker at the umbo (2-3 inches broad), disc fleshy, thin towards the margin, flesh reddish ochre. Stem thick, solid, equal, or attenuated upwards (3-4 in. long, $\frac{1}{2}$ in. thick), pale above, darker below, marked with concentric dark ferruginous fibrillose bands. Gills adnate, sinuate, rather narrow, scarcely crowded, pale, then bright ferruginous-red. Spores pyriform, minutely rough, $8 \times 5 \mu$.—*Cooke Illus. t.* 835.

In swampy places. Orton Moss, near Carlisle. (Dr. Carlyle.)

Cortinarius (Telamonia) microcycclus, *Fr. Hym. Eur.* 376.

Pileus submembranaceous, convexo-plane, even, smooth, testaceous-brown, becoming pale, opaque, umbonate, disc darker. Stem stuffed, attenuated upwards from the thickened base, pallid. Veil collapsing in an annular zone. Gills adnate, broad, distant, lilac, then cinnamon.—*Cooke Illus. t.* 865.

Under trees. Broxbourne. Oct., 1887.

Stature and habit of *C. decipiens*. Pileus 1 inch broad.

Cortinarius (Hydrocybe) tortuosus, *Fr. Hym. Eur.* 389.

Pileus rather fleshy, convex, somewhat gibbous, smooth, even, shining, ferruginous-bay (brick-red when dry). Stem rather hollow, rigid, equal, somewhat twisted, silvery. Gills adnate, crowded, quite entire, fulvous, becoming purple when wounded.—*Cooke Illus. t.* 857.

In damp pine woods. Scarborough.

Distinctive by becoming purple when bruised.

Cortinarius (Hydrocybe) unimodus, *Britzelmeyer Hym. Sudb.* 17., *f.* 131.

Pileus campanulate then expanded, rufous brown, smooth, margin straight. Stem equal, fibrous, of the same tint. Gills distant, brown. Spores $10-12 \times 8 \mu$.—*Cooke Illus. t.* 859.

In grassy places. Carlisle. (Dr. Carlyle.)

Pileus 4-5 cm. Stem 8 cm. long, 6-7 mm. thick. The diagnoses by Britzelmeyer are so meagre that his species can only be conjectured.

Cortinarius (Hydrocybe) bicolor, *Cooke.*

Pileus rather fleshy, campanulate, then expanded, broadly, or occasionally rather acutely umbonate (1-2 in. diam.), somewhat fragile, dingy whitish, with an occasional tinge of lilac, even, smooth, silky, shining, flesh thin, colour of the pileus, or paler. Stem equal, or attenuated downwards (about 2 in. long, $\frac{1}{4}$ in. thick), pallid violet, becoming whitish, solid. Flesh bright purplish-violet at the base, pallid above. Gills adnate, with a tooth, sub-ventricose, slightly eroded at the edge, rather broad, scarcely crowded, purplish violet, then cinnamon. Spores elliptical, a little attenuated towards one or both ends, $10 \times 5-6 \mu$. Veil fugacious, white.—*Cooke Illus. t.* 871.

On the ground in mixed woods. Park End, Forest of Dean, near Carlisle; Blaize Castle woods, near Bristol.

To this species evidently belong the specimens figured in "Illustrations," pl. 820, f. B., under the name of *C. quadricolor*, from which species it differs considerably.

Paxillus (Lepista) lividus, *Cooke Illus. t.* 861.

Pileus convex, at length slightly depressed at the disc, dingy white, or livid ochraceous, opaque (1-2 inches). Stem attenuated downwards, white (3-4 in. long, $\frac{1}{2}$ in. thick), fibrillose, stuffed, then hollow. Gills arcuate, decurrent, white, almost crowded. Spores globose, nearly white, flesh nearly white.

In woods. Leigh Down, Bristol. (C. Bucknall.)

Paxillus (Lepista) revolutus, *Cooke.*

Pileus convex, obtuse, pale ochraceous, slightly darker at the disc, margin thin, even, sometimes at first tinged with violet, a little revolute. Stem solid, gradually attenuated downwards, paler than the pileus, often tinted violet at the base. Gills very decurrent, scarcely crowded, pallid, then clay-coloured. Odour mealy.—*Cooke Illus. t.* 862.

In field. Sandy Lane, near Guildford. (T. Howse.)

Pileus about an inch and a half. Stem $1\frac{1}{2}$ -2 in. long, about $\frac{1}{2}$ in. thick at the apex, $\frac{1}{4}$ in. at the base.

Paxillus (Lepista) orcelloides, Cke. & Mass.

Pileus at first snow white, becoming stained with livid or greyish blotches, minutely silky, shining, margin thin, involute. Stem tapering towards the base, solid, elastic, silky-fibrillose, livid ochraceous. Gills crowded, readily separating from the horny hymenophore, whitish, then livid, at length dirty yellowish-brown, adnate, decurrent. Spores $8 \times 4 \mu$.—Cooke *Illus. t.* 874 B.

Amongst grass. Queen's Cottage Grounds, Kew.

Paxillus (Tapinia) crassus, Fr. *Hym. Eur.* 404.

Pileus fleshy, oblique, nearly plane, becoming even, and ferruginous. Stem stuffed, excentric, very short, ascending. Gills decurrent, broad, rather distant, straight, cinnamon. Spores ferruginous, $15-18 \times 7-8 \mu$.—Cooke *Illus. t.* 877.

On mound of rifle butts. Blackheath. Nov., 1885. (T. Howse.)

This agrees with specimen in Herb. Berk., but it seems to be rather a *Flammula* than a *Paxillus*.

Lactarius (Russularia) cremor, Fries *Hym. Eur.* 432.

Pileus fleshy, thin, convex, then plane, minutely punctulate, viscid, tawny, margin striate. Stem hollow, fragile, of the same colour. Gills adnate, rather distant, pallid. Milk mild, watery, white. Spores globose, rough, 10μ .

In woods. Carlisle. (Dr. Carlyle.)

Stem 2 in. long, 3-4 lines thick.

Bovista ovalispora, Cke. & Mass.

Subglobose, sessile. Cortex thin, whitish or ochraceous, subpersistent. Peridium thin, flaccid, smooth, dull lead-colour, dehiscing by an irregular apical rupture. Capillitium and spores umber in the mass. Threads $12-16 \mu$ at the thickest part, much and vaguely branched, tapering to long slender tips, dirty umber by transmitted light. Spores oval ($6 \times 4\frac{1}{2} \mu$), brownish umber, with a narrow hyaline border, caused by the thickened epispore, pedicels long and stout, hyaline.

On the ground. Kew Gardens. Nelson (New Zealand). S. Carolina (U.S.A.).

Differing from *B. plumbea* in being larger (2 inches or more) in the oval spores, and from *B. nigrescens* in the oval spores and absence of purple tinge in the capillitium and spores.

Lycoperdon Cookei, Mass. in *Journ. Roy. Micr. Soc.*, 1887, p. 14, t. 13, f. 24-26.

Hemispherical or globose, abruptly contracted into a short, thick, stem-like base, smoky-brown above, white below, minutely areolato-furfuraceous, dehiscing by a small irregular mouth. Capillitium continuous with the well-developed cellular sterile base, threads varying in thickness, simple, firm. Spores bright citrine-yellow, then olivaceous-umber, globose, smooth, sometimes

stipitate, 4 μ diam.—*L. pusillum*, Cooke Science Gossip, Dec., 1886.

On the ground. Norfolk, Kew Gardens ; Albany, U.S. ; Port Jackson, Australia.

Gregarious $\frac{1}{2}$ – $\frac{2}{3}$ in. across.

Lycoperdon perlatum, Pers. Syn. 145 ; Mass., l.c., p. 10.

Lycoperdon gemmatum, Batsch. Elen., p. 147 ; Mass., l.c., p. 10.

These two species should be kept distinct.

Puccinia Bupleuri, Rud. in Linnæa iv., 514.

Epiphyllous and cauliculous. Sori oblong, gregarious, soon fissured, and surrounded by remains of the epidermis, dark brown, rather small. Telentospores elliptical, uniseptate, brown, 26–40 \times 18–30 μ .—*Corda Icon. iv., f. 50.*

Puccinia Bupleuri falcata, Winter in Rabh. Krypt. Fl. i., 212.

On *Bupleurum tenuissimum*. Walton on the Naze. Aug., 1837. (R. Paulson.)

Valsa (Calospora) alnicola, C. & Mass.

Perithecia few, circinating, nestling beneath the elevated bark, which is at length pierced by the short ostiola. Asci clavate, octosporous. Sporidia cylindrical, obtuse, slightly curved, tri-septate, hyaline, 25 \times 8 μ .

On branches of *Alnus autumnalis*. Kew.

2661. Chaetosphaeria pileo-ferruginea, Cronan. Sacc. Syll. 3216.

Sporidia lanceolate, uniseptate, 4–6, nucleate, hyaline, 45–50 \times 8 μ .

On roots of *Calluna*. Near Carlisle. (Dr. Carlyle.)

The perithecia being smooth, and the sporidia with scarcely any tinge of colour, this species should have been placed in *Byssosphaeria* in our "Synopsis Pyrenomycetum." There are faint indications that the sporidia may become 3–5 septate, but the specimens were clearly not fully mature.

Cucurbitaria Aspegrenii, Ces. & Not. Sac. Syll. 3987.

Sporidia 7 septate, muriform, brown, 48–53 \times 12–14 μ .

On cherry. Queen's Cottage, Kew.

Ostreichnion Americanum, Duby Hyst. t. 1, f. 1. Sacc. Syll. II., No. 5715.

Sporidia 100 \times 35 μ , tips pale or colourless.

On pine wood. Scarboro'. (G. Masee.)

Also found on Fries' specimens of *Lophium mytilinum*, in Scler. Suec. No. 10. Not hitherto recorded as European. We cannot accept Saccardo's alteration of the generic name of *Ostreichnion* to *Ostreion*, however vicious the former may be, after it has been accepted and adopted for so many years. Note, for example, the *Cinchona v. Chinchona* discussion in 1866. "In these kinds of questions it must be borne in mind, first, that the fixity of names is of superior importance ; secondly, that a botanist has the right to construct a name in any way he pleases, something in the form of a man's name, for instance." See *Commentary on Laws of Nomenclature*, 1868.

Phoma salicifolia, Cooke.

Epiphyllous. Perithecia very minute, punctiform, scattered, or more commonly gregarious in small orbicular patches. Sporules subglobose or oval, continuous, hyaline, $6 \times 4 \mu$.

On dead leaves of *Salix*. Kew.

Phoma Buddleiæ, Cooke.

Perithecia scattered, minute, covered by the epidermis, which is slightly elevated, and at length pierced. Sporules oval, hyaline, $6 \times 4 \mu$.

On twigs of *Buddleia globosa*. Kew.

Fusicoccum Betulæ, Cke.

Stroma black, erumpent, scattered, verrucæform, nucleus whitish. Sporules fusiform, continuous, hyaline; $20-25 \times 6 \mu$, on simple or furcate basidia.

On twigs of *Betula papyracea*. Kew.

Cytisporina hysterioides, Cooke.

Stroma gregarious, elongated, elliptical, breaking through the bark and resembling an erumpent *hysterium*, black. Sporules cylindrical, obtuse, curved, continuous, hyaline, 20×4 , on short basidia.

On twigs of *Celtis*. Kew.

Cytisporina staphyleæ, Cke.

Stroma minute, scattered, black, convex, erumpent. Sporules cylindrical, obtuse, curved, multi-nucleate, 25×4 , on very short, simple basidia.

On twigs of *Staphylea trifoliata*. Kew.

Phlæospora Æsculi, Cooke.

Hypophyllous, pseudo-perithecia innate, at length opening above. Sporules oozing out in masses, cylindrical, or obtusely fusiform, triseptate, hyaline, $30-35 \times 8 \mu$.

On leaves of *Castanea vesca*. Shere. (Dr. Capron.)

Marsonia Ipomææ, Cke. & Mass.

Pustules densely aggregated on the stems, erumpent, breaking the cuticle in an irregular manner and becoming dark coloured, so as to resemble an *Uredo* to the naked eye. Conidia oozing out in short tendrils, narrowly-oblong or subcylindrical, obtuse at the ends, uniseptate, hyaline, $10-15 \times 3 \mu$.

On living stems and leaves of *Ipomæa*. Kew Gardens. Oct., 1887.

Hypodermium orchidearum, Cke. & Mass.

Pustules erumpent, linear, or narrowly-oblong, girt by the fissured epidermis. Conidia cylindrical, rounded at the ends, concatenate, continuous, granular within, hyaline, $25-27 \times 5 \mu$, on short, thick sporophores.

On leaf of *Cymbidium chrysanthum*.

Fusidium Deutzæ, Cooke.

Hypophyllous. Tufts small, convex, pulverulent, flesh-coloured. Conidia fusiform, straight, hyaline, continuous, $16-20 \times 3-4 \mu$, on very short sporophores.

On fading leaves of *Deutzia*. Holloway.

Oidium erumpens, *Cke. & Mass.*

Hypophyllous. Pastules greyish-white, erumpent, rather compact, becoming dark coloured with age. Conidia subglobose, at first, by compression, somewhat quadrate, concatenate, hyaline, $5 \times 7 \mu$, on short stout sporophores.

On living leaves of *Rivea hypocrateriformis*. Kew Gardens.

Tubercularia Ligustri, *Cooke.*

Tubercles minute, convex, erumpent, soon black, and depressed in the centre, sessile. Sporules very minute, elliptical, hyaline, $2 \times 1 \mu$. Sporophores short, delicate, apparently simple.

On twigs of *Ligustrum*. Kew.

Tubercularia conorum, *Cke. & Mass.*

Tubercles sessile, erumpent in lines, convex, often confluent, rosy. Threads long, straight, erect. Conidia allantoid, obtuse, $8-10 \times 2-3 \mu$.

On fir cones. Carlisle. (Dr. Carlyle.)

Tubercularia aquifolia, *C. & Mass.*

Tubercles scattered, innate, at length erumpent, pallid flesh colour, sessile. Threads rather thick, furcate. Conidia narrowly-elliptical or sausage-shaped, obtuse, $12-15 \times 2-3 \mu$.

On dead holly leaves. Highgate.

Fusarium bulbigenum, *Cke. & Mass.*

Effused, whitish, at first somewhat erumpent in small tufts, which become confluent. Conidia fusiform, arcuate, or incurved at the acute extremities, triseptate, hyaline, $40-50 \times 5 \mu$.

On diseased bulbs of *Narcissus*.

Fusarium myosotidis, *Cooke.*

Hypophyllous. Spots small, irregular, pallid. Stroma thin. Conidia fusiform, curved, triseptate, hyaline, $30 \times 3-4 \mu$.

On fading leaves of *Myosotis*. Forden. (Rev. J. E. Vize.)

PUFF BALLS.

We must call the attention of Mycologists to two monographs, the one of the Lycoperdons, by Mr. G. Massee, in the "Journal of the Royal Microscopical Society," prepared with great care, and the examination of authentic specimens; the other of the Geasters, by Dr. de Toni, in "Revue Mycologique." We regret to add that the latter has *not* been prepared with the requisite care, and unfortunately leaves the genus more confused than ever. Species are united which have no relation to each other, and assumptions made where the types have not been consulted to an extent which, to our minds, renders the monograph valueless. The time and space required to demonstrate this would be as great as to prepare a fresh monograph, and we are too fully employed, but the necessity for a thorough and practical monograph, based upon indisputable data, is more urgent now than ever.

SYNOPSIS PYRENOMYCETUM.

(Continued from p. 19.)

Sub.-Fam. 3. ROSELLINÆ. Perithecia subsuperficialia, glabra, denudata, plerumque carbonacea.

GEN. 1. **PSILOSPHÆRIA.** Perithecia denudata, sporidia hyalina, continua vel septata.

* CÆLOSPHÆRIA. *Sporidia allantoidea, hyalina.*

2950. *chiliopyxis*, B. & C. 381 2951. *veneta*, Sacc. & Berl. 6256

** WALROTHIELLA. *Sporidia continua, hyalina.*

2952. *congregata*, Wallr. 1755 2957. *minutissima*, Cr... 1761

2953. arceuthobi, *Peck*... 1756 2958. bombardella, *Ces.* 4305

2954. minima, Fekl. ... 1757 2959. eunotiaespora, C. &

2955. *squalidula*, *Cke.* ♂ *Hark.* ... 6399

Ph. ... 1759 2960. Fendleri, B. & C., Grev.

2956. *melanostigma*, C. & xv., 82

* * ZIGNOINA. *Sporidia continua, hyalina, guttulata.*

2961. *seriata*, Curr. ... 3648 2966. *nitidula*, Sacc. ... 3655

2962. papillata, Fekl. ... 3649 2967. macrospora, Sacc. 3656

2963. pygmæa, *Karst.* ... 3650 2968. collabens, *Curr.* ... 3658

2964. ostioloidea, *Cke.*... 3651 2969. latericolla, *Berk.*... 3661

2965. *diaphana*, C. & E. 3653 2970. *Mulleri*, Duby. ... 2992

*** LEPTOSPORA. *Sporidia continua, hyalina, pseudoseptata.*

2971. spermoides, Fr. ... 3565

*** BERTIA. *Perithecia rugulosa*, sporidia didyma, hyalina.

2972. moriformis, *Tode.* 2272 2976. lichenicola, *Not....* 2276

2972. moriformis, *Poac.* ... 2272
2973. submoriformis, ... 2273
2974. nemorosus, *Arct.* ... 2274
2975. ... 2275
2976. nemorosus, *Arct.* ... 2276
2977. vitis, *Schulz.* ... 2277

2977. *Plow.* ... 2273 2978. *leptosporoides,*

2974. *italica*, *Speg.* ... 2274 *Wint.* ... 5890

2975. australis, *Speg.* ... 2275

*** ZIGNARIA. *Sporidia didyma, hyalina.*

2979. campi-silii, *Sacc.*.... 3646 2980. segregata, *B. & C.* 3647

***** MELANOPSAMMA. *Sporidia didyma, hyalina.*

2981. pomiformis, Pers. 2248 2987. latericollis, Fr. ... 2259

2982. pustula, *Curr.* ... 2251 2988. improvisa, *Karst.* 2262

2983. confertissima, 2263

Plow. ... 2253 2990. recessa, *Che.* & *P.* 2265

2984. congesta, *Speg.* ... 2255 2991. subfasciculata,

2985. Bolleana, *Pass.* ... 2256 *Schurz.* ... 4309

2986. *rhodomphalos*, Berk 2258

- 2992 conospora, *B. & C., Grev.* 2994 amphispheeria,
 xv., 82 *Schul. & Sacc....* 6515
 2993 Saccardiana, *Bomm.* 2995 Romelliana, *Sacc.* 6517
 & *Roum.* ... 6514

**** ZIGNOELLA. *Sporidia pluriseptata, hyalina.*

A. Sporidia triseptata.

2996. semen, *C. & Pk....* 3460 2997. Keitii, *Berk.* ... 3620

B. Sporidia 1-5 septata.

2998. macrospora, *Sacc.* 2279 2999. parasitica, *Fab.* ... 2280

C. Sporidia multiseptata.

3000. ovoidea, *Fr.* ... 3626 3014. sociabilis, *Schulz. &*
Sacc. ... 7060
 3001. pulviscula, *Curr.* 3627 3015. Haynaldii, *Schulz.*
& Sacc. ... 7061
 3002. punctiformis, *Sacc.* 3628 3016. jurana, *Sacc. &*
Berl. ... 7062
 3003. exigua, *C. & Pk....* 3629 3017. grænendalensis,
Sacc. & R. ... 7064
 3004. cariosa, *C. & E.* ... 3630 3018. sequanica, *Sacc. &*
Mal. ... 7065
 3005. conica, *Fckl.* ... 3631 3019. Hanburiana, *Penz.*
& Sacc. ... 7058
 3006. atrella, *C. & E.* ... 3634 3020. Britzelmayeri,
Sacc. ... 3540
 3007. funicola, *Ellis* ... 3639
 3008. rhytidodes, *B. & Br.* 3640
 3009. fallax, *Sacc.* ... 3641
 3010. incerta, *Speg.* ... 3642
 3011. astrocarya, *Cke....* 3643
 3012. dolichospora, *Sacc.* 3644
 3013. Vincenziæ, *Cke., Grev.*
 xv., 81

GEN. 2. **ASTROCYSTIS**, *Berk.* Perithecia volva stellata
 erumpentia. *Sporidia ovoidea, fusca.*

3021. mirabilis, *B. & Br.* 1096

GEN. 3. **ROSELLINIA**. Perithecia superficialia, glabra.
Sporidia continua, fusca.

A. CALOMASTIA. Perithecia grandiuscula, glabra.

3022. mammiformis, *P.* 938 3028. cellarum, *Lamb* ... 947
 3023. mastoidea, *S.* ... 939 3029. obliquata, *Sow.* ... 949
 3024. callimorpha, *Karst.* 6310 3030. sublimbata, *DR. &*
M. ... 941
 3025. medullaris, *Wallr.* 940 3031. mammoidea, *Cke.* 962
 3026. arancosa, *P.* ... 943 3032. cocoinum, *Cooke...* 5983
 3027. Julii, *Fab.* ... 946

B. TASSIELLA. Perithecia rugulosa.

3033. Tassiana, *Not.* ... 950 3037. pachydermatica,
Ces. ... 1008
 3034. callosa, *Wint.* ... 951 3038. molleriana, *Wint.* 6311
 3035. megalocarpa, *Plow.* 952 3039. papaverea, *B. & Br.* 937
 3036. moroides, *Curr.* ... 954 3040. rotula, *Cooke* ... 897

C. CONIOMELA. *Peritheciis minoribus, glabris.*a. *Lignicolæ.*

- | | | | |
|------------------------------|----------|---------------------------------|------|
| 3041. pulveracea, Ehr.... | 968 | 3056. umbrinella, B. & C. | 981 |
| var. platysporella, Speg. | | 3057. verrucaria, M. ... | 982 |
| 3042. myriocarpa, Fr. ... | | 3058. Winteriana, Sp.... | 983 |
| 3043. millegrana, Schw. | 969 | 3059. arctospora, C. & E. | 984 |
| 3044. dispersa, B. ... | 970 | 3060. microspora, Ces.... | 985 |
| 3045. rimincola, Rehm. | 971 | 3061. dispersella, Nyl.... | 986 |
| 3046. rugulosa, Sch. & Sacc. | ... 6312 | 3062. hypoxylina, Ces.... | 987 |
| 3047. rosarum, Nssl. ... | 972 | 3063. pseudobombarda, S. | 988 |
| 3048. socia, Not. ... | 973 | 3064. microscopica, Not. | 990 |
| 3049. etrusca, Fab. ... | 974 | 3065. ovalis, Ellis ... | 989 |
| 3050. sordaria, Fr. ... | 994 | 3066. opaca, Cke. ... | |
| 3051. catervaria, B. & Br. | 975 | 3067. barbatula, B. & C., Grer. | |
| 3052. apiculata, S. ... | 977 | xv., 81 | |
| 3053. sylvana, S. ... | 978 | 3068. transversalis, Schw. | 4308 |
| 3054. spadicea, Ces. ... | 979 | 3069. umbrino-velata, B. | |
| 3055. ulmaticolor, B. & C. | 980 | & C. ... | 1475 |
| | | 3070. oblectans, Ces. ... | 1084 |

b. *Folii color.*

3071. pandanicola, B. & Br. 976

c. *Lichenicolæ*

- | | | | |
|---------------------------|------|--------------------------|------|
| 3072. Cladonia, Anzi. ... | 1014 | 3074. aspera, Hazsl. ... | 1016 |
| 3073. nephromatis, Cr. | 1015 | | |

d. *Dubia.*

- | | | | |
|--------------------------|----------|--------------------------|------|
| 3075. rhypara, B. & Br. | 1018 | 3078. plana, Preuss. ... | 1022 |
| 3076. Tulasnei, Cr. ... | 1019 | 3079. prorumpens, Bon. | 1023 |
| 3077. Schumacheri, Hans. | ... 1020 | 3080. pulverulenta, Bon. | 1024 |
| | | 3081. brunnea, Bon. ... | 1025 |

D. *Sporidia fusca, continua, episorpio asperulo.*

3082. rhombispora, Sacc. 948

E. BOMBARDIA. *Sporidia ovoidea, fusca, caudataque.*

- | | | | |
|----------------------------|------|----------------------------|------|
| 3083. fasciculata, Fr. ... | 1026 | 3084. bertioidea, Ces. ... | 1027 |
|----------------------------|------|----------------------------|------|

GEN. 4. **MELANOMMA.** *Perithecia subsuperficialia, glabra. Sporidia septata, fusca.** AMPHISPHERIA. *Sporidia misseptata.*

- | | | | |
|----------------------------|------|-------------------------------|----------|
| 3085. hesperidium, Penz. | 2723 | 3092. fæda, Not. ... | 2742 |
| 3086. stilbostoma, Nsl.... | 2725 | 3093. melasperma, Cke. | 2745 |
| 3087. monstrosa, Bagu. | 2727 | 3094. Passerinii, S. & S. | 2746 |
| 3088. atrograna, C. & E. | 2734 | 3095. salebrosa, C. & P. | 2747 |
| 3089. dunarum, Sp. ... | 2735 | 3096. sapinea, K. ... | 2752 |
| 3090. congruella, Karst. | 2737 | 3097. decorticata, C. & Hark. | ... 6615 |
| 3091. pædida, B. & Br.... | 2740 | | |

3098. dothideaspora, *C.* 3101. pulcherrima, *Speg.* 2754
 & *Hark.* ... 6618 3102. enteroxantha, *Ces.* 2755
 3099. hypoxylon, *Ell. & Ev.* 6619 3103. australis, *Speg.* ... 2756
 3100. heteromera, *Br. &* 3104. biturbinata, *DR. &*
 Sacc. ... 6614 *M.* ... 2759

** MELANOMMA. *Sporidia* 2-3 septata.

3105. pulviscula, *Karst.* 6698 3123. medium, *S. & S.* ... 3241
 3106. pulvis-pyrinus, *Pers.* 3223 3124. cubonianum, *Sacc.* 3242
 = *obscura*, *Pers.* in litt. 3125. *Stevensoni*, *B. & Br.* 3243
 = *Julii*, *Fab.* ... 3250 3126. porothelia, *B. & C.* 3244
 3107. pyriosticta, *Cke., Grev.* 3127. truncatulum, *Sacc.*
 xv., 83 & *Roum.* ... 7003
 3108. fuscidulum, *Sacc.* 3224 3128. *Lenarsii*, *West.* ... 3246
 3109. ramincola, *Schw., Grev.* 3129. *mori*, *Fab.* ... 3248
 xv., 83 3130. *minervæ*, *Fab.* ... 3249
 3110. obducens, *Not.* ... 3225 3131. erraticulum, *Karst.* 7004
 3111. Briardianum, *Sacc.* 6699 3132. Gibellianum, *Sacc.* 3251
 3112. Mussatianum, *Sacc.* 3133. verrucaria, *Fr.* ... 3255
 & *Roum.* ... 7000 3134. conjugatum, *Not.* 3256
 3113. effugiens, *Karst.* ... 7001 3135. lonicerina, *Karst.* 3258
 3114. obtusum, *Sacc.* ... 3227 3136. inspissa, *Schw.* ... 4312
 3115. Holmskjældii, 3137. Lambottianum,
 Karst. ... 3230 *Sacc.* ... 3261
 3116. Heufferi, *Awd.* ... 3231 3138. sanguinarium, *K.* 3264
 3117. fissum, *Fekl.* ... 3234 3139. sulcatum, *Ellis* ... 7009
 3118. subsparsum, *Fekl.* 3235 3140. congesta, *Cke.* ... 7010
 3119. sparsum, *Fekl.* ... 3236 3141. seminis, *Cke. &*
 3120. subdispersum, *Karst.* 7002 *Hark.* ... 7007
 3121. catillus, *Sacc.* ... 3237 3142. parmeliarum, *Pl. &*
 3122. disjectum, *Karst.* 3238 *Ph.* ... 3158

** *Sporidia* 4-pluriseptata.

3143. juniperinum, *Karst.* 3266 3146. phænum, *Rehm.* ... 3271
 3144. Beccarianum, *Ces.* 3268 3147. uliginosa, *Fr.* ... 4303
 3145. hepophagum, *Tul.* 3270

** TREMATOSPIRÆRIA. *Sporidia* 5-septata, fusca.

3148. pseudobombarda, 3149. allantospora, *B. & C.* 1498
 Mont. ... 3309

*** STUARTELLA. *Perithecia tuberculata. Sporidia magna, tri-septata, fusca.*

3150. formosa, *Fab.* ... 3314

GEN. 5. **STRICKERIA**, *Korb.* *Perithecia sparsa vel gregaria, superficialia. Sporidia murali-divisa, fusca.*

* TEICHOSPORÆ. *Peritheciis non collabentibus.*

3151. nitidula, *Karst.* ... 3877 3154. trabicola, *Fekl.* ... 3880
 3152. propendula, *Karst.* 3878 3155. Chevalieri, *Karst.* 3881
 3153. oleicola, *Pass.* ... 3879 3156. circumelusa, *Not.* 3882

- | | |
|--|---------------------------------------|
| 3157. anceps, <i>Sacc.</i> ... 3883 | 3163. ampullacea, <i>Rehm.</i> 3900 |
| 3158. sarmenticia, <i>Sacc.</i> 3889 | 3164. oxystoma, <i>Sacc.</i> ... 3901 |
| 3159. vaga, <i>Rehm.</i> ... 3891 | 3165. pruniformis, <i>Nyl.</i> 3903 |
| 3160. obducens, <i>Fr.</i> ... 3894 | 3166. mesascium, <i>Not.</i> ... 3904 |
| 3161. macrosperma, <i>Fckl.</i> 3897 | 3167. vetusta, <i>Ellis</i> ... 3908 |
| 3162. sylvana, <i>S. & S.</i> ... 3899 | 3168. vile, <i>Fr.</i> ... 3226 |

** STRICKERIA, *peritheciis dein collapsis-concavis.*

- | | |
|---|--|
| 3169. ignavis, <i>Not.</i> ... 3895 | 3173. helichrysi, <i>Fab.</i> ... 3913 |
| = <i>morthieri</i> , <i>Fckl.</i> 3896 | 3174. pomiformis, <i>Karst.</i> 3914 |
| 3170. pezizoides, <i>S. & S.</i> 3909 | 3175. artemisiæ, <i>Fab.</i> ... 3916 |
| 3171. patellarioides, <i>Sacc.</i> 3910 | 3176. deflectens, <i>Karst.</i> 3917 |
| 3172. Rabenhorstii, <i>Awd.</i> 2911 | |

* * CROTONOCARPIA. *Peritheciis corrugato-tuberculatis.*

3177. moriformis, *Fckl.* 3932

GEN. 6. **OHLERIA**, *Fckl.* Perithecia superficialia, macula, atra, stromatica insidentia. Sporidia 3-septata, fusca, in articulos biloculares sedentia.

- | | |
|--|---------------------------------------|
| 3178. rugulosa, <i>Fckl.</i> ... 3218 | 3181. ulmi, <i>Fckl.</i> ... 3221 |
| 3179. modesta, <i>Fckl.</i> ... 3219 | 3182. obducens, <i>Wint.</i> ... 3222 |
| 3180. quercicola, <i>Fab.</i> ... 3220 | |

SPECIES DUBLE.

- | | |
|---|---|
| 3183. notha, <i>Fr.</i> ... 4302 | 3187. nigro-brunnea,
= <i>abnormis</i> , <i>Schw.</i> ... 4310 |
| 3184. columnaris, <i>Jungh.</i> 4304 | 3188. inconstans, <i>Schw.</i> 4311 |
| 3185. depolita, <i>B. & C.</i> ... 4306 | 3189. hydrangæ, <i>Schw.</i> 4313 |
| 3186. alvear, <i>Ces.</i> ... 4307 | 3190. brunnea, <i>Schw.</i> ... 4314 |
| | 3191. aggregata, <i>Schw.</i> 4315 |

Sub-Fam. 4. SORDARIAE.

GEN 1. **SORDARIA**, *Ces.* Perithecia submembranacea, plerumque fimicolæ. Sporidia circulo mucoso v cauda instructa.

A. EUSORDARIA. *Octospori. Sporidia caudata.*

* *Fimicolæ.*

- | | |
|---|---|
| 3192. coprophila, <i>Fr.</i> ... 838 | 3202. curvula, <i>D'By.</i> ... 848 |
| 3193. natalitia, <i>Speg.</i> ... 839 | 3203. Winteri, <i>Karst.</i> ... 849 |
| 3194. minuta, <i>Fckl.</i> ... 840 | 3204. micrura, <i>Speg.</i> ... 850 |
| 3195. communis, <i>Speg.</i> ... 841 | 3205. appendiculata,
<i>Auers.</i> ... 851 |
| 3196. neglecta, <i>E. & C.</i> 842 | 3206. decipiens, <i>Wint.</i> ... 852 |
| 3197. hirta, <i>Hans.</i> ... 843 | 3207. ampicornis, <i>Ell.</i> 853 |
| 3198. fimiseda, <i>Ces.</i> ... 844 | 3208. valsoides, <i>Ph.</i> ... 854 |
| 3199. californica, <i>Plow.</i> 845 | 3209. squamulosa, <i>Cr.</i> ... 855 |
| 3200. carbonaria, <i>Plow.</i> 846 | 3210. marcescens, <i>B.</i> ... 963 |
| 3201. bombardioides,
<i>Auers.</i> ... 847 | |

** *Phytogenæ.*

3211. lignicola, <i>Nkl.</i> ...	856	3217. austro-americana	
3212. tomentosa, <i>Speg.</i> ...	857	<i>Speg.</i> ...	862
3213. caudata, <i>Cun.</i> ...	858	3218. cirsii, <i>Cr.</i> ...	863
3214. lanuginosa, <i>Pr.</i> ...	859	3219. palmicola, <i>Awd.</i>	
3215. culmigena, <i>Sacc.</i> ...	860	<i>Myc. Univ.</i> ...	2168
3216. leucotricha, <i>Speg.</i>	861	3220 sparganica, <i>Ph. & Pl.</i> ...	6303

I. MALINVERNIA. *Tetraspori.*

3221. anserina, <i>Rabh.</i> ...	864	3224. sarawacensis, <i>Ces.</i>	867
3222. australis, <i>Speg.</i> ...	865	3225. pauciseta, <i>Fckl., F.</i>	
3223. erecta, <i>Speg.</i> ...	866	<i>Rhen.</i> 1002	

II. BOVILLA. *Sporidia fili-fusiformia, cadata.*

3226. bovilla, <i>Cke.</i> ...	4114	= (<i>Bovilla capronii</i> , <i>Sacc.</i>)	
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III. DUBIÆ.

3227. grisea, <i>Ces.</i> ...	868		
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B. HYPOCOPRA, *Fckl.* *Sporidia ecaudata.*a. *Fimicolæ.*

3228. fimicola, <i>Rob.</i> ...	869	3239. argentina, <i>Speg.</i> ...	880
3229. humana, <i>Fckl.</i> ...	870	3240. insignis, <i>Hans.</i> ...	882
3230. discospora, <i>Auers.</i>	871	3241. barbata, <i>Hans.</i> ...	883
3231. platyspora, <i>Plow.</i>	872	3242. scatigena, <i>B. & B.</i>	884
3232. superba, <i>Not.</i> ...	873	3243. minima, <i>S. & S.</i> ...	885
3233. vagans, <i>Not.</i> ...	874	3244. stercoraria, <i>Sow.</i> ...	886
3234. microspora, <i>Plow.</i>	875	3245. leucoplaca, <i>B. & R.</i>	887
3235. macrospora, <i>Auers.</i>	876	3246. acanthigera, <i>B. & Br.</i> ...	3563
3236. gigaspora, <i>Fckl.</i> ...	877	3247. Winteri, <i>Oud.</i> ...	5920
3237. Capturæ, <i>Speg.</i> ...	878	3248. Saccardoi, <i>March.</i> ...	6304
3238. aviaria, <i>Karst.</i> ...	879		

b. HYPOCOPRINA. *Tetrasporæ.*

3249. serignanensis, <i>Fab.</i>	888	3251. Rabenhorstii.	
3250. maxima, <i>Niessl.</i> ...	889	<i>Niessl.</i> ...	890

c. *Non vera fimicolæ.*

3252. papyricola, <i>Wint.</i>	891	3255. phyllogena, <i>Sacc.</i>	893
3253. Rehmii, <i>Sacc.</i> ...	*891	3256. vesticola, <i>B. & Br.</i>	896
3254. fermenti, <i>Fckl.</i> ...	892	3257. consanguinea, <i>Ces.</i>	5921

d. *Dubiæ.*

3258. bolbitoni, <i>Quel.</i> ...	898	3261. equina, <i>Fr.</i> ...	901
3259. punctiformis, <i>Ces.</i>	899	3262. macrotheca, <i>Cr.</i> ...	902
3260. hippica, <i>Sacc.</i> ...	900		

C. COPROLEPA, Fekl. *Perithecia dense, aggregata.*

3263. fimeti, P. ...	903	3266. Saccardoi, Oud. ...	5922
3264. meridiana, Fr. ...	904	3267. Kickxii, March. ...	6305
3265. equorum, Fekl. ...	905		

D. PHILOCOPIA, Speg. *Perithecia sparsa. Sporidia numerosa, ut plurimum caudata.*

3268. pleiospora, Wint. ...	906	3275. multifera, B. & Rav. ...	913
3269. setosa, Wint. ...	907	3276. dubia, Hans. ...	914
3270. curvicolla, Wint. ...	908	3277. zygospora, Speg. ...	915
3271. platensis, Speg. ...	909	3278. Hansenii, Oud. ...	5923
3272. similis, Hans. ...	910	3279. polyspora, Ph. & Pl. ...	*911
3273. canina, Ph. ...	911		
3274. myriospora, Cr. ...	912		

E. DELITSCHIA. *Sporidia uniseptata, fusca.*

3280. furfuracea, Niessl. ...	6623	3286. minuta, Fekl. ...	2776
3281. Auerswaldi, Fekl. ...	2771	3287. moravica, Nsl. ...	2777
3282. bisporella, Cr. ...	2772	3288. sordarioides, Speg. ...	2778
3283. chaetomioides, Karst. ...	2773	3289. Winteri, Plow. ...	2779
3284. congregata, Speg. ...	2774	3290. elephantina, Pass. ...	2780
3285. graminis, Nsl. ...	2775	3291. Marchalii, Berl. & Vogl. ...	6624

GEN. 2. **SPORORMIA**, Not. (Perisporiacei affinis.) *Perithecia emergentia, membranacea. Sporidia 4-18 locularia (secedentia) fusca.*

† SPORORMIELLA. *Sporidia 4-locularia.*

3292. pulchella, Hans. ...	3315	3302. gigantea, Hans. ...	3325
3293. stercoris, Fr. ...	3316	3303. ovina, Desm. ...	3326
3294. minima, Ard. ...	3317	3304. Spegazzinii, Pir. ...	3327
3295. leporina, Nsl. ...	3318	3305. grandispora, Speg. ...	3328
3296. Notarisii, Car. ...	3319	3306. leptospharoides, Speg. ...	3329
3297. promiscua, Car. ...	3320	3307. lignicola, Ph. & Pl. ...	3330
3298. ambigua, Nsl. ...	3321	3308. ulmicola, Pass. ...	3331
3299. lageniformis, Fekl. ...	3322	3309. Rommegnerii, Linn. ...	3332
3300. intermedia, Ard. ...	3323		
3301. megalospora, Ard. ...	3324		

†† SPORORMIA. *Sporidia 5-multilocularia.*

3310. vexans, Ard. ...	3333	3318. pulchra, Hans. ...	3339
3311. heptamera, Ard. ...	3334	3319. corynespora, Nsl. ...	3340
3312. variabilis, Wint. ...	3335	3320. insignis, Nsl. ...	3341
3313. pentamera, Oud. ...	7012	3321. gigaspora, Fekl. ...	3342
3314. commutata, Nsl. ...	3336	3322. ticiensis, Pir. ...	3343
3315. octomera, Ard. ...	3337	3323. fimetaria, Not. ...	3344
3316. brassicae, Grove ...	7012	3324. octoloculata, Pab. ...	6145
3317. pasena, Nsl. ...	3338	3325. immersa, Zuk. ...	7014

BRITISH HYPHOMYCETES.

A CATALOGUE OF KNOWN SPECIES.

By M. C. COOKE.

ORD. 1. *MUCEDINEÆ*.

- Chromosporium lateritium**, B. & Br. *Sacc. Syll.* iv., 5.
On *Ulmus montana*. St. Catherine's.
- Chromosporium rubiginosum** (Carm.).
On beech leaves. Appin.
- Microstoma album**, Desm. *Sacc. Syll.* iv., 17.
On oak leaves. Milton, Shere, Lynn, Forden, St. Leonards.
- Oospora Epilobii**, Desm. *Sacc. Syll.* 24.
On *Epilobium*. Richmond, Kew.
- Oospora fasciculata** (Berk.). *Sacc. Syll.* iv., 23.
On decayed oranges. Edinburgh.
- Oospora lactis**, Fries. *Sacc. Syll.* iv., 45.
On milk and cheese.
- Oospora porriginis**, M. & B. *Sacc. Syll.* iv., 46.
On *Porriago lupinosa*. London (Dr. Tilbury Fox).
- Oospora pulmonea** (Beun.). *Sacc. Syll.* iv., 47.
In human pneumonia.
- Oospora æquivoca**, Corda. *Sacc. Syll.* iv., 53.
On *Polyporus Schweinitzii*. Dorsetshire.
- Oospora rosella**, Grove. *Sacc. Syll.* iv., 63.
On horse dung. Birmingham.
- Oospora crustacea** (Bull.). *Sacc. Syll.* iv., 72.
On old cheese, &c. London, Shrewsbury, Richmond, Hereford, Norths.
- Oospora aurantia**, Cooke. *Sacc. Syll.* iv., 81.
On spent hops. Burton-on-Trent.
- Oospora favorum**, B. & Br. *Sacc. Syll.* 83.
On honeycomb. Woolwich.
- Oospora microsperma**, Berk. *Sacc. Syll.* 84.
On spruce bark. Batheaston.
- Oospora fulva** (Kunze). *Sacc. Syll.* 85.
On rotten wood. Shrewsbury, Norths.
- Oospora abortifaciens**, Berk. *Sacc. Syll.* 101.
On the ovary of grasses. Norths.
- Oospora inæqualis**, Cke. & M. *Græc.* xvi., p. 10.
On bamboo. Kew.
- Fusidium viride**, Grove. *Sacc. Syll.* 103.
On dead *Heracleum*. Bradnocks Marsh.
- Fusidium griseum**, Link. *Sacc. Syll.* 105.
On oak leaves. Shere, Highgate, Dimmore, Epping, Dartford, Kew, Broxbourne, Forden, King's Cliffe.

Fusidium sulphureum, *Link.* *Sacc. Syll.* 122.

On leaves. Appin.

Fusidium asteris, *Plow. & Ph.* *Sacc. Syll.* 125.

On *Aster tripolium*. King's Lynn.

Fusidium deutzia, *Cke. Grev.* XVI., 48.

On leaves of *Deutzia*. Holloway.

Monilia aurea, *Link.* *Sacc. Syll.* 149 (*hesperidica* S.)

On bark and wood. Forden, Hereford, Southwick, Norths, Batheaston.

Monilia fructigena, *Pers.* *Sacc. Syll.* 157.

On rotting apples, &c. Hereford, Twyercross, Norfolk, Swanscombe, Hants, Apethorpe. Forden, Shrewsbury.

Monilia racemosa, *Pers.* *Sacc. Syll.* VI., 163.

On rotting substances. Halifax.

Cylindrium Cordæ, *Sacc. Syll.* 169.

On oak leaves. Kew Gardens (Spor. 30-35 \times 4-6 μ). Birmingham.

Cylindrium flavovirens, *Ditm.* *Sacc. Syll.* 171.

On dead leaves. Highgate, Darenth, Hampstead, Forden, Dinmore, Loughton.

Cylindrium heteronemum, *Sacc. Syll.* IV., 177.

On willow trunks and cow dung.

Polyscytalum fungorum, *Sacc. Syll.* 1622.

On *Nyctalis*.

Geotrichum roseum, *Grove.* *Sacc. Syll.* IV., 185.

On *Juncus*. Sutton Park, near Birmingham.

Oidium erysiphoides, *Fr.* *Sacc. Syll.* IV., 189.

On living leaves of hop, &c. Dartford, Highgate, Largo, Forden, Audley End.

Oidium leucoconium, *Desm.* *Sacc. Syll.* IV., 190.

On leaves of roses. Highgate, Holm Lacey, Stoke Edith, Norfolk, Forden, Oxford, Audley End.

Oidium Tuckeri, *Berk.* *Sacc. Syll.* IV., 191.

On vine leaves and grapes. Common. Margate, Hampstead.

Oidium farinosum, *Cooke. Grev.* XVI., p. 10.

On apple shoots and leaves. Penge, Hereford, Kew.

Oidium erumpens, *C. & M. Grev.* XVI., 49.

On leaves of *Rivea hypocrateriformis*. Kew.

Oidium chrysanthemi, *Rab.* *Sacc. Syll.* 199.

On *Chrysanthemum*. Dublin.

Oidium aceris, *Rabh.* *Sacc. Syll.* 207.

On maple. Forden.

Oidium mespili, *Cke.* *Sacc. Syll.* 208.

On medlar. Clevedon.

Oidium pactolium, *Cooke.* *Sacc. Syll.* 209.

On jasmine leaves. Isleworth.

Oidium Balsamii, *Mont.* *Sacc. Syll.* 218.

On *Verbascum* and turnip leaves. Sydenham, Forden, Wothorpe.

- Oidium monilioides**, *Link. Sacc. Syll.* 219.
On grass. Common. Forden, East Bergholt, Norfolk,
Hereford, Abridge, Kew, Glasgow.
- Edocephalum roseum**, *Cooke. Sacc. Syll.* 226.
On paper and rags. Highgate.
- Edocephalum læticolor**, *B. & Br. Sacc. Syll.* 228.
On sheep dung.
- Edocephalum Preussii**, *Sacc. Syll.* 233.
On dead leaves of *Heuchera*. Kew Gardens (1887).
- Rhopalomyces candidus**, *B. & Br. Sacc. Syll.* 240.
On dung, earth, and hops. King's Cliffe.
- Rhopalomyces pallidus**, *B. & Br. Sacc. Syll.* 241.
On old matting. King's Cliffe.
- Botryosporium diffusum**, *Grer. Sacc. Syll.* 265.
On branches, &c. Neatishead, Weybridge.
- Botryosporium pulchrum**, *Corda. Sacc. Syll.* 266.
On herb stems. Shere.
- Cephalosporium acremonium**, *Corda. Sacc. Syll.* 270.
On , Scarboro'.
- Papulaspora sepedonioides**, *Preuss. Sacc. Syll.* 282.
On rice paste. King's Cliffe, Batheaston.
- Trichoderma viride**, *Pers. Sacc. Syll.* 284.
On wood and bark. Downton, Dinmore, Epping, Lyndhurst,
Apethorpe, Glasgow, Twycross, Highgate, Carlisle, Man-
chester, Dupplin, Kew, Shrewsbury.
- Aspergillus glaucus**, *Link. Sacc. Syll.* 304.
On vegetable substances. Common. Dublin, King's Cliffe.
- Aspergillus griseus**, *Link. Sacc. Syll.* 306.
On fruit, &c.
forma fenestrale, *Ditm.*
On glass. London.
- Aspergillus virens**, *Link. Sacc. Syll.* 309.
In wasps' nests, rotten fungi, &c.
- Aspergillus candidus**, *Link. Sacc. Syll.* 315.
On fungi, &c. Common. Holloway, King's Cliffe.
- Aspergillus mollis**, *Berk. Sacc. Syll.* 320.
On dead leaves.
- Aspergillus roseus**, *Link. Sacc. Syll.* 326.
On paper and linen.
- Aspergillus flavus**, *Link. Sacc. Syll.* 328.
On paste. Blackheath.
- Aspergillus spiralis**, *Grove. Sacc. Syll.* 332.
On phial cork. Birmingham.
- Aspergillus nigricans**, *Cooke. Sacc. Syll.* 337.
In meatus auditorius of human ear.
- Sterigmatocystis dubia** (*B. & Br.*). *Sacc. Syll.* 346.
On dung of rabbits. King's Cliffe.
- Amblyosporium botrytis**, *Fries. Sacc. Syll.* 372.
On *Agarics*.

- Penicillium glaucum**, *Link.* *Sacc. Syll.* 373.
On decaying vegetables. Common. St. Alban's, London, Norfolk, Holloway, Appin, Glasgow, Hereford, King's Cliffe, Epping.
- Penicillium quadrifidum**, *Salisb.* *Sacc. Syll.* 378.
In human blood.
- Penicillium pruriosum**, *Salisb.* *Sacc. Syll.* 379.
On mucous membrane.
- Penicillium candidum**, *Link.* *Sacc. Syll.* 381.
On leaves and decaying substances. King's Cliffe. Ivy leaves. Kew.
- Penicillium hypomycetis**, *Sacc.* *Syll.* 382.
On *Stereum*.
- Penicillium subtile**, *Berk.* *Sacc. Syll.* 385.
On dead *Salix*. Tansor. Norths.
- Penicillium megalosporum**, *B. & Br.* *Sacc. Syll.* 386.
In old cli-ken coop. Menmuir.
- Penicillium sparsum**, *Grev.* *Sacc. Syll.* 390.
On rotting *Lappa*.
- Penicillium abnorme**, *B. & Br.* *Sacc. Syll.* 393.
On leaves of *Trientalis*.
- Penicillium bicolor**, *Fries.* *Sacc. Syll.* 394.
On putrid substances.
- Penicillium macrosporum**, *B. & Br.* *Sacc. Syll.* 396.
On rotting *Lactarii*. Near London.
- Penicillium coffeicolor**, *B. & Br.* *Sacc. Syll.* 403.
On Pasteur's solution. South Kensington.
- Penicillium roseum**, *Lk.* *Sacc. Syll.* 405.
On box leaves. Batheaston. Forden, Wiltshire.
- Briarea elegans**, *Sturm.* *Sacc. Syll.* 412.
On rotting grass. Edinburgh.
- Haplaria grisea**, *Link.* *Sacc. Syll.* 414.
On grasses. &c. Margate.
- Hyphoderma roseum**, *Pers.* *Sacc. Syll.* 434.
On old wood.
- Acremonium alternatum**, *Link.* *Sacc. Syll.* 435.
On dead leaves. Stibbington (Hants). Dupplin.
- Acremonium verticillatum**, *Link.* *Sacc. Syll.* 436.
On pine trunks. Edinboro'.
- Rhinotrichum repens**, *Preuss.* *Sacc. Syll.* 443.
On rotten wood. Hereford, Kew, Coed Coch.
- Rhinotrichum opuntia**, *B. & Br.* *Sacc. Syll.* 445.
On ? Woolwich.
- Rhinotrichum decolorans**, *Cooke.* *Sacc. Syll.* 446.
On beech chips. Forden.
- Rhinotrichum lanosum**, *Cooke.* *Sacc. Syll.* 451.
On wall paper. Holloway.
- Rhinotrichum Bloxami**, *B. & Br.* *Sacc. Syll.* 454.
On wood. Twycross. Gopsal, Kew.

- Rhinotrichum decipiens**, Cooke. *Sacc. Syll.* 455.
On bark, &c. Carlisle.
- Rhinotrichum ramosissimum**, B. & C. *Sacc. Syll.* 469.
On wood. Moffatt, N.B.
- Rhinotrichum Thwaitesii**, B. & Br. *Sacc. Syll.* 470.
On naked ground. Near Bristol.
var. **fulvum**, Grove.
On rotten wood. Hampton in Arden.
- Rhinotrichum niveum**, C. & M. *Grav. xvi.*, p. 10.
On rotten wood. Chiswick
- Sporotrichum laxum**, Nees. *Sacc. Syll.* 483.
On rotten wood. Twycross.
- Sporotrichum (Microsporon) mentagrophytes**, Rob. *Sacc. Syll.* 499.
On bulbs of human hair.
- Sporotrichum flavissimum**, Link. *Sacc. Syll.* 519.
On wood, &c.
- Sporotrichum sulphureum**, Grav. *Sacc. Syll.* 520.
On corks, &c. Whitehall, King's Cliffe, Forden.
- Sporotrichum aurantiacum**, Grav. *Sacc. Syll.* 523.
On dung. Near Edinburgh.
- Sporotrichum geochroum**, Desm. *Sacc. Syll.* 532.
On rotten wood.
- Sporotrichum chlorinum**, Link. *Sacc. Syll.* 569.
On oak leaves. Glasgow.
- Monosporium olivaceum**, C. & M. *Grav. xvi.* .
On *Corticium* and naked wood. Carlisle.
- Monosporium coprophilum**, C. & Mass. *Grav. xvi.*, p. 10.
On dung (human?). Kew Gardens.
- Monosporium saccharinum**, B. & Br. *Sacc. Syll.* 593.
On putrescent substances. Batheaston.
- Botrytis trabea**, B. & Br. *Sacc. Syll.* 597.
On chips. King's Cliffe.
- Botrytis citrina**, Berk. *Sacc. Syll.* 624.
On cherry branches. King's Cliffe.
- Botrytis brevior** (B. & Br.). *Sacc. Syll.* 635.
On bark. Leigh Wood.
- Botrytis argillacea**, Cooke. *Sacc. Syll.* 646.
On wood. Darenth, Forden, Carlisle, Kew.
- Botrytis virella**, Fr. *Sacc. Syll.* 653.
On wood. Chiswick.
- Botrytis Tilletii**, Desm. *Sacc. Syll.* 660.
On mosses, &c. Hampstead, Darenth.
- Botrytis corolligenum**, C. & Mass. *Grav. xvi.*, p. 10.
On corolla of *Calceolaria*. Kew.
- Botrytis (Polyactis) vulgaris**, Fr. *Sacc. Syll.* 664.
On herbs. Common. Shrewsbury, Hampstead.
- Botrytis (Polyactis) cana**, Kunze. *Sacc. Syll.* 665.
On leaves. Highgate, Forden, Glasgow.
- Botrytis (Polyactis) vera**, Fr. *Sacc. Syll.* 666.
On *Polyporus versicolor*. Halifax.

- Botrytis (Polyactis) cinerea**, Pers. Sacc. Syll. 667.
On herb stems. Common. Holloway, Highgate, Birmingham, Appin, Glasgow.
var. **sclerotiophila** (Kunze).
On *Sclerotium durum*. Wiltshire, Highgate.
- Botrytis (Polyactis) croci**, Cke. & Mass. Grev. xvi., p. 10.
On dead leaves of *Crocus*. Kew.
- Botrytis (Polyactis) capitata**, B. & Br. Sacc. Syll. 680.
On *Cheiranthus*. Sibbertoft.
- Botrytis (Polyactis) fascicularis**, Corda. Sacc. Syll. 686.
On horse chestnut husks. Kew. Highgate.
- Botrytis (Cristularia) deprædans**, Cooke. Sacc. Syll. 691.
On leaves of *Acer*. Norfolk.
- Botrytis (Acmosporium) tricephala**, Phil. Sacc. Syll. 698.
On leaves of *Cryptomeria*. Shrewsbury.
- Botrytis (Acmosporium) galanthina**, B. & Br. Sacc. Syll. 705.
On bulbs of snowdrops.
- Ovularia asperifolii**, Sacc. Syll. 735.
On leaves of *Symphytum*.
- Ovularia veronicæ**, Fekl. Sacc. Syll. 742.
On leaves of *Veronica*.
- Ovularia lamii**, Fekl. Sacc. Syll. 744.
On leaves of *Lamium*. Forden, Epping, Dinmore.
- Ovularia berberidis**, Cooke. Sacc. Syll. 746.
On leaves of *Berberis asiatica*. Kew.
- Ovularia syringæ**, Berk. Sacc. Syll. 747.
On leaves of *Syringa*. Aberdeen.
- Ovularia obliqua**, Cooke. Sacc. Syll. 750.
On leaves of *Rumex*. Highgate, Abridge, Forden, Leatherhead, Neatishead, Audley End, Gopsall, Downton, Breinton.
- Ovularia elliptica**, Berk. Sacc. Syll. 752.
On lilies in cultivation. Gard. Chron., 1881.
- Ovularia filipendulæ**, Cke. Grev. xvi.
On *Spiræa filipendula*. Kew Gardens.
- Sepedonium chrysospermum**, Bull. Sacc. Syll. 754.
On *Boletus*. Kew, Haywood Forest, near Leicester, Twycross, Lyndhurst, Epping Forest, Highgate, Tunbridge, King's Cliffe, Coed Coch, Bristol.
- Sepedonium Tulasneanum**, Sacc. Syll. 766.
On *Boletus*.
- Asterophora agaricicola**, Corda. Sacc. Syll. 770.
On *Nyctalis*. Haywood Forest, Loughton, Darent.
- Verticillium candelabrum**, Bon. Sacc. Syll. 777.
On wood. Mortlake.
- Verticillium distans**, B. & Br. Sacc. Syll. 784.
On herb stems. Cranford Bridge.
- Verticillium terrestre**, Pers. Sacc. Syll. 785.
On the ground. King's Cliffe.
- Verticillium nanum**, B. & Br. Sacc. Syll. 789.
On pears. Cranford Bridge.

- Verticillium agaricinum**, Link. Sacc. Syll. 790.
On *Russula*. Darenth, Chingford.
- Verticillium lactescens**, Sacc. Syll. 791.
On *Lactarius*.
- Verticillium microspermum**, Sacc. Syll. 793.
On *Polyporus annosus*.
- Verticillium aspergillus**, B. & Br. Sacc. Syll. 795.
On *Polyporus vaporarius*. Kelmarsh, Norths.
- Verticillium compactiusculum**, Sacc. Syll. 781.
On vanilla pods. Kew.
- Verticillium quaternellum**, Grove. Sacc. Syll. 796.
On *Agaricus (Mycena)*. Middleton.
- Verticillium epimyces**, B. & Br. Sacc. Syll. 798.
On *Elaphomyces*. Rudloe (Wilts), Batheaston.
- Verticillium buxi**, Link. Sacc. Syll. 800.
On box leaves. Apethorpe.
- Verticillium lateritium**, Berk. Sacc. Syll. 808.
On wood, bark, &c. Kew, Forden, Batheaston, King's Cliffe, Elmstead, Sketty, Isleworth.
- Verticillium ampelinum**, C. & Mass. Grev. xvi.
On vine knots. Kew.
- Verticillium Vizei**, B. & Br. Vize Micro. Fungi 247.
On ferns. Forden.
- Acrostalagmus cinnabarinus**, Corda. Sacc. Syll. 839.
On leaves, branches, &c. Liverpool, Whitehall.
- Clonostachys araucaria**, Corda. Sacc. Syll. 849.
On bark. Weybridge, Wales.
- Spicaria elegans**, Corda. Sacc. Syll. 853.
On bark.
var. **muscorum**, Grove.
On moss and wood. Sutton, Warwickshire.
- Gonatobotrys simplex**, Corda. Sacc. Syll. 863.
On fruit of *Tamus*.
- Gonatobotrys flava**, Bon. Sacc. Syll. 864.
On dead cabbage stalks. Isleworth.
- Nematogonium aurantiacum**, Desm. Sacc. Syll. 867.
On bark. Apethorpe.
- Nematogonium aureum**, Berk. Sacc. Syll. 868.
On bark. Batheaston.
- Diplocladium penicilloides**, Sacc. Syll. 872. Grev. t. 150.
On *Polyporus* (conidia of *Hypomyces aurantius*).
- Diplocladium melleum**, B. & Br. Sacc. Syll. 874.
On *Polyporus* and *Stereum*. Batheaston.
- Diplocladium Rennyi**, B. & Br. Sacc. Syll. 875.
On trunks. Hereford.
- Diplosporium album**, Bon. Sacc. Syll. 877.
var. **fungicolum**.
On *Ethalium septicum*.
- Diplosporium cervinum**, B. & Br. Sacc. Syll. 879.
On branches of laburnum. Ballinluig, Lambely.

Trichothecium roseum, *Pers. Sacc. Syll.* 881.

On bark, &c. Kew, Highgate, Forden, Shrewsbury, Audley End, King's Cliffe, Glasgow, Hampstead, Dinmore, Shere, Darenth, Colchester, Rudloe.

Trichothecium domesticum, *Fr. Sacc. Syll.* 882.

On oil seeds from the Gaboon.

Trichothecium candidum, *Sacc. Syll.* 883

On bark. Lindfield, Kew.

Trichothecium obovatum, *Berk. Sacc. Syll.* 884.

On willow branches. King's Cliffe.

Trichothecium pyriferum, *Berk. Sacc. Syll.* 885.

On dead stems.

Cephalothecium candidum, *Sacc. Syll.* 891.

On bark. Sketty (F. Currey).

Arthrobotrys rosea, *Massee. Sacc. Syll.* 896.

On branches. Scarborough.

Mycogone rosea, *Link. Sacc. Syll.* 899.

On *Agarics*. Appin.

Mycogone cervina, *Ditm. Sacc. Syll.* 900.

On fungi and dead leaves. Eastbourne.

Mycogone anceps, *Sacc. Syll.* 902.

On human dung.

Mycogone puccinioides, *Preuss. Sacc. Syll.* 903.

On *Russula*. Near Bath.

Didymaria Ungerii, *Corda. Sacc. Syll.* 904.

On *Ranunculus repens*. Abridge.

Bostrichonema alpestris, *Ces. Sacc. Syll.* 909.

= *Dactylium spirale*. B. & White.

On leaves of Bistort. Glen Tilt.

Bostrichonema modestum, *Bk. & Wh. Sacc. Syll.* 910.

On leaves of *Alchemilla alpina*. Glen Tilt.

Dactylium dendroides, *Bull. Sacc. Syll.* 916.

On *Agarics*. Darenth, Epping.

Dactylium macrosporum, *Ditm. Sacc. Syll.* 918.

On oak leaves.

Mucrosporium sphærocephalum, *Berk. Sacc. Syll.* 923.

On ivy twigs. Lambley.

Mucrosporium tenellum, *Fr. Sacc. Syll.* 924.

On moss, &c. Dnndee.

Dactylella minuta, *Grove. Sacc. Syll.* 937.

On rotten wood. Sutton.

Dactylella rhombospora, *Grove. Sacc. Syll.* 938.

On wood and bark. Birmingham.

Dactylella ellipsospora, *Preuss. Sacc. Syll.* 939.

On rotten wood. Birmingham.

Dactylella implexa, *B. & Br. Sacc. Syll.* 941.

On willow trunks. Hereford.

Ramularia destructiva, *Pl. & Phil. Sacc. Syll.* 962.

On branches of *Myrica gale*. N. Wootton.

- Ramularia rosea**, *Fekl. Sacc. Syll.* 966.
On willow leaves.
- Ramularia alnicola**, *Cooke. Sacc. Syll.* 967.
On alder leaves. Lyndhurst.
- Ramularia hellebori**, *Fekl. Sacc. Syll.* 970.
On leaves of *H. fetidus*.
- Ramularia scelerata**, *Cooke. Sacc. Syll.* 971.
On *Ranunculus sceleratus*. Lyndhurst.
- Ramularia cochleariæ**, *Cooke. Sacc. Syll.* 977.
On *Cochlearia officinalis*. Banks of Don.
- Ramularia armoraciæ**, *Fekl. Sacc. Syll.* 978.
On horseradish leaves.
- Ramularia lacteæ**, *Desm. Sacc. Syll.* 979.
On violet leaves. Kew, near Hereford, Loughton.
- Ramularia ulmaricæ**, *Cooke. Sacc. Syll.* 989.
On leaves of meadow sweet.
- Ramularia lychnicola**, *Cooke. Sacc. Syll.* 993.
On leaves of *Lychnis diurna*. Lyndhurst.
- Ramularia geranii**, *West. Sacc. Syll.* 994.
On leaves of *Geranium*. Lynn.
- Ramularia malvæ**, *Fekl. Sacc. Syll.* 995.
On *Malva moschata*. Forbes, N.B.

LACTARIUS EXSUCCUS AND AGARICUS RUSSULA.

BY THE EDITOR.

There were people, in olden days, who said, "Can any good thing come out of Nazareth?" and in these times we have their analogue in the Recorder (in *Gardeners' Chronicle*, Nov. 5, 1887) of the Paris Mycological Congress. He evidently believes that there is nothing so good, or so true, as that which is derived from either a Frank or a Teuton. Even the air of Paris made him feel generous, so that he condemned the stupidity of English mycologists (himself included) in two memorable instances, to both of which, being neither Teuton nor Frank, though equally just to both, we venture to take exception.

In the first place, he says "*Russula delica*, Fr., a plant I was exceedingly pleased to see, because it is the *Lactarius vellereus*, var. *exsuccus*, Smith, which we so commonly meet with. Every fungologist knows it, with its gills showing a tinge of green in oblique light, and it is very satisfactory to correct one's errors, even if you have to go as far as Paris to do so." Now this would have been a respectable paragraph for an ordinary penny-a-liner, but for one who professes to be a fungologist, and something of a man of science, it is less creditable, apart from its dogmatism. The last-named fungus is not *Lactarius vellereus*, var. *exsuccus*, Smith, but the *Lactarius exsuccus*, Smith (or rather of Otto), and the *Agaricus piperatus*, var. *exsuccus*, Pers. Syn. 429, or *Lactarius vellereus*, var. *exsuccus*, Fries.

Apart from this, he *knows* that it "is" what he assumes it to be, and not *Lactarius exsuccus* alone, but also *Russula delica*, Fr. That is to say, we are to take his word, because he knows all about it, and that the illustrious Fries was a "muff," and described the same thing under two names, once as *Russula delica*, and once as a variety of *Lactarius vellereus*. It is greatly to be regretted that Fries did not consult this Anglican mycologist thirty-five years ago, when the latter was experimenting daily on the potato disease, in which case he might have been spared such an absurd error. But, apart from the dogmatic "is" of the paragraph, might it not be as well to examine the facts. *Russula delica*, Fr., is described as smooth and shining, with white gills, and, we believe, smooth, subglobose, or oval spores, about $10 \times 8 \mu$, whereas *Lactarius exsuccus*, Otto, has a tomentose pileus, a somewhat tomentose stem, greenish tinted gills, and globose echinulate spores, about 8.9μ . If these two species are one, or *should* be one, according to the said Recorder's dictum, we must for the present beg leave to dissent, and in like terms declare that *Lactarius exsuccus*, Otto, is not the same as *Russula delica*, Fr., although we have not been to Paris in order to enable us to say so. What effect the sumptuous banquets and profusion of champagne, which we are informed were bestowed upon the English mycologists, might have had it is vain to speculate.

The second paragraph runs as follows:—"The last-named (*Hygrophorus erubescens*, Fr.) was placed near a figure of *Agaricus russula*, a plant we find at Downton, and have hitherto confounded with *Hygrophorus erubescens*. The *Tricholoma* is the larger and paler plant, the *Hygrophorus* is much smaller, more distinctly red, with a dash of purple, and reminding one somewhat of *Agaricus laccatus*, but with decurrent gills." This paragraph is far more puzzling than the former one, and, although not less dogmatic, far less satisfactory. It would be folly to attempt to discuss it in print, save by reference to well-known figures. As far as we know, the Downton plant alluded to well corresponds with the description of *Hygrophorus erubescens* and as well with the figure of that species by Fries himself (Sverige Svampar, t. 65). Figure of this is now being printed for "Illustrations of British Fungi," plate 888, drawn from specimens exhibited some years since at a Woolhope Fungus Foray, presumably from Downton. *Agaricus* (*Tricholoma*) *russula*, Schæff., is not in the slightest suggestive of *Agaricus laccatus*, any more than the *Hygrophorus*. It is much more suggestive of *Russula sanguinea*, Fr., much darker and brighter than *Hygrophorus*, and in fact not comparable with it. Were it not akin to treason to say as much, it is nevertheless our private opinion that the writer has never seen *Agaricus russula*, Schæff., and that he has either been imposed upon (after dinner) or has attempted to make himself believe that something, which he does not know, is the veritable *Agaricus russula*, or

else *Hygrophorus erubescens*, for he has evidently "got mixed," as people are apt to do when in the company of congenial friends late in the day. For *Agaricus russula* we would refer to Schæffer's plate 58, which is the type, and Krombholz's plate 63, figs. 1 to 9; our own figures will be published in a supplementary part of "Illustrations" very shortly.

Without setting up any claim to infallibility, we ask for a suspension of judgment until we have completed our evidence by the publication of figures, and then, if the verdict of competent authorities should be pronounced that the "editorial we" in this instance is only a stupid Englishman, we shall not regret that we have hardly been so dogmatic as some people, in face of a possibility of mistake, but quietly submit to our fate, without undertaking in the "correction of one's errors even to go as far as Paris to do so."

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Grevillea,

A QUARTERLY RECORD OF CRYPTOGAMIC BOTANY
AND ITS LITERATURE.

SOME EXOTIC FUNGI.

By M. C. COOKE.

Corticium (Coniophora) sordulentum, *Cooke & Mass.*

Tenue, membranaceum, olivaceo-ochraceum, tuberculatum, papillatumve, hymenio pulverulento. Hyphis dichotomi-ramosis. Sporibus globosis, majusculis, pallide fuscis (10-12 μ diam.).

On bark. Missouri, U.S. (*Ellis* 5055).

Xylopodium Aitchisoni, *Cke. & Mass.*

Peridio clavato dein pyriformi, deorsum in stipitem rigidum attenuato, stipite æquali vel basim leniter bulboso, longitudinaliter sulcato-striato, squamuloso, solido. Sporibus late ochraceo-fuscis, globosis, asperulis 6-7 μ diam.

On the ground. Delimitation Commission, Afghanistan, 1884-5 (*Dr. J. E. T. Aitchison*).

Bovista amethystina, *Cooke & Mass.*

Globose, cortex evanescent, peridium (1-1½ inch) thin, papyraceous, shining, fragile, breaking away in patches, mass of spores bright amethystine violet, globose, smooth, 5-6 μ diam., pale violet by transmitted light, threads about as thick as diameter of the spores, branched, equal, almost colourless.

On the ground. Niger Expedition (*Barter*).

Thamnomycetes dendroidea, *Cke & Mass.*

Stromate rigido, erecto (6-8 unc.) cylindrico, atro, nitido, sursum dichotomo-ramoso, fragili, ad apicem ramulorum inflato-ampulliformi. Peritheciis immersis, minutis, periphericis, ascis cylindræis, octosporis. Sporidiis cylindricis, utrinque rotundatis, plerumque curvulis, fuscis 12 \times 4-5 μ , conidiis hyalinis, sub-globosis 4 \times 3 μ .

On dead wood. Upper Demerara River, British Guiana.

Remarkable species uniting *Thamnomycetes* more intimately with *Nylaria*. Extremely fragile. The urn-shaped fertile tips of the branchlets are hollow, there is no corky stroma, but the whole

plant is carbonaceous. The conidia are produced at the free ends of the fertile tips.

Plate 172, Fig. A. *a*, stroma, natural size; *b*, a fertile tip magnified; *c*, section of same; *d*, ascus and sporidia $\times 400$; *e*, sporidia $\times 400$; *f*, conidia $\times 400$.

***Dimerosporium insignis*, Cooke.**

Peritheciis gregariis, superficialibus, minutis, atris; subiculo conidiophoro in maculis orbicularas effuso, hyphis simplicibus furcatisve, erectis, gracilis, atrofusis, conidiis ellipticis, minutis, hyalinis ($3 \times 2 \mu$), ascis octosporis, lanceolatis, sessilibus, sporidiis arcte ellipticis, continuis, hyalinis ($12 \times 4 \mu$).

On leaves of *Eurya Japonica*. Ternate.

***Dermatea pallidula*, Cooke.**

Erumpens, cupulis convexis, subcæspitosis (2-4), testaceo-carneis, demum pallescentibus (1-2 mm. lat.), deorsum in stipite brevi communi attenuatis; margine obsoleto; ascis clavatis, octosporis; sporidiis ellipsoideo-lanceolatis, utrinque obtusis, triseptatis, hyalinis ($25 \times 9 \mu$), paraphysibus sursum incrassatis, brunneis.

On branches of *Rhus venenata*. New Jersey, U.S. (*J. B. Ellis*).

This and *Dermatea crypta*, Cooke, are supposed to have been described many years ago, but reference to them cannot now be found.

***Dermatea crypta*, Cooke.**

Erumpens, pallide umbrina, glaucescens, cupulis solitariis vel (2-3) cæspitosis, deorsum attenuatis, connatis, hymenio plano vel subconcavo ($\frac{1}{2}$ mm. diam.). Ascis breviter clavatis. Sporidiis lanceolato-ellipticis, triseptatis, fuscis ($30 \times 10 \mu$) paraphysibus sursum incrassatis, fuscis.

On branches of *Andromeda*, *Azalea*, &c. New Jersey, U.S. (*J. B. Ellis*).

***Uredo cussoniæ*, Cooke.**

Hypophylla. Soris minutis, hæmisphericis, demum fissuratis, pallide fuscis. Uredosporis ellipticis, spinulosis, subhyalinis, demum fuscis ($25 \times 18 \mu$).

On leaves of *Cussonia*. Inanda, Natal (*Wood 3494*).

***Uredo compositarum*, var. *melantheræ*, Cooke.**

Uredosporis subglobosis, asperulis, fuscis (18μ diam.).

On leaves of *Melanthera Brownii*. Durban, Natal (*Wood 3850*).

***Coniothyrium Indicum*. Cke. & Mass.**

Peritheciis gregariis, globosis, erumpentibus, primo tectis, dein subsuperficialibus, atris, opacis ($\frac{1}{3}$ - $\frac{1}{2}$ mm. diam.). Sporulis globosis, atro fuscis, demum opacis (8μ diam.).

On twigs of *Salix*. Hindu Kooshi at an elevation of 11,500 feet. (Gilgit Expedition.)

***Periconia opaca*, Cooke.**

Atra, gregaria, hyphis erectis (3-4), septatis, simplicibus, atrofusis, opacis, capitulo subgloboso (5-6), conidiarum composito,

conidiis globosis, deorsum minute apiculosis (12-15 μ diam.), atrofusceis, opacis, lævibus.

On leaves of *Carices*. South Carolina (*Ravenel* 3140).

Hymenula glandicola, *Cooke*.

Sporodochiis gregariis, oblongis, pallidis, subgelatinosis, conidiis ellipsoideis, continuis, hyalinis ($8 \times 5 \mu$).

On acorns. New York (*Gerard* 208).

Stigmella pithyophila, *Cooke*.

Epiphylla, cæspitulis punctiformibus, atris, sparsis, superficialibus; conidiis aggregatis, oblongis, biseptatis, subconstrictis, septulo longitudinali divisis, pallide olivaceis ($30 \times 12 \mu$).

On pine leaves. Harpswell, Maine.

Stilbum Kurzianum, *Cooke*.

Solitarium vel cæspitosum, minutum, capitulo subgloboso, albido. Stipite fusco-badjo, deorsum leviter incrassato, conidiis ellipticis, nucleo excentrico ornatis ($10 \times 4.5 \mu$).

On branches. Seebpore, Bengal, India (*Kurz* No. 2197).

Isaria plumosa, *Cooke*.

Solitaria. Stromate erecto (ad. 1 unc.) carneo, plumoso-ramosissimo, ramulis elongatis, attenuatis, undique glabris, subcorneis, conidiis minutis, globosis, hyalinis (3μ diam.).

On midrib of dead leaves. Brazil (*Spruce Lichenes Amazonici* No. 502).

Isaria repens, *Cooke*.

Stromatibus filiformibus, intertextis, niveis, hyphas fasciculatas compositis, ubique sporophoris brevibus gerentibus. Conidiis ellipticis, continuis, hyalinis ($8 \times 4.5 \mu$).

On glumes of *Gynerium argenteum*. California.

Resembling a species of *Acremonium* with a compound stem. Anomalous.

Corallo dendron cervinum, *Cke. & Mass.*

Stromatibus erectis, rigidis, cervinis (ad. 1 unc. long), hyphis violaceis, septatis (10μ diam.) compositis; stromate sparse ramosis, ramis breviter ramulosis, ramulis numerosis, patentibus, brevibus, apice in capitula globosa incrassatis. Conidiis ovalibus ($12 \times 7.8 \mu$), primo (3-4) catenulatis.

On seeds of *Landolphia* from Africa (*E. M. Holmes*).

The last joint of the compacted threads is fuscous, and forms a kind of basidium bearing the short chain of spores.

Graphium leguminum, *Cooke*.

Stipitibus gregariis, rigidis, erectis, tenuibus, atris (1 mm. long), e hyphis septatis, atrofusceis compositis; capitulo conidiorum subellipticis. Conidiis clavatis, superne rotundatis, inferne truncatis ($20.25 \times 6 \mu$), hyalinis.

On legumes of *Rhynchosia*. South Carolina (*Ravenel* 1866).

Epidochium eucalypti, *Cooke*.

Sporodochiis erumpentibus, gregariis, sessilibus, atris, tremelloideis, discoideis, plerumque concavis, basidiis filiformibus, ramosis,

fuscis, conidiis elongato-ellipsoideis ($10-14 \times 3-4 \mu$), utrinque rotundatis, hyalinis, continuis.

On dead leaves of *Eucalyptus*. California.

Chromosporium pactolinum (C. & H.).

On *Quercus*. California.

Described as *Corticium pactolinum*, C. & H. Spores yellow, $10 \times 6 \mu$.

AUSTRALIAN FUNGI.

By M. C. COOKE.

(Continued from p. 31.)

Those species which are indicated by an asterisk (*) were communicated by Baron F. von Mueller.

***Agaricus (Amanitopsis) curtus**, Cke. & Mass.

Pileo convexo, explanato, ochraceo-albo, lævi, glabro, margine velo appendiculato, stipite brevi, solido, bulboso, testaceo, glabro, volva ampla circumscissa marginato, deorsum fibrilloso-radicato; lamellis liberis, remotis, subdistantibus, angustis, albis, sporis ellipticis, $19-22 \times 10 \mu$.

On the ground. Mordialloc, Victoria. (C. French.)

Agaricus (Lepiota) lavendulæ, C. & M., must replace *Ag. (Lepiota) columbicolor*, C. & M., Grev. xvi., p. 30, not *Ag. columbicolor*, B. & Br.

Agaricus (Pleurotus) polyphemus, C. & M., must replace *Ag. (Pleurotus) polychromus*, C. & M., Grev. xvi., p. 31, not *Ag. polychromus*, B. & Br.

Agaricus (Flammula) hyperion, Cke. & Mass.

Pileo plano-convexo, demum explanato (3 unc. lat.) carnoso, aureo-fulvo, dein obscuriore, lævi, glabro, margine incurvo, carne flavido, stipite deorsum attenuato, subconcolori, striato-sulcato, fibrilloso, subsquamuloso (2 unc. long, $\frac{1}{2}-\frac{3}{4}$ unc. crass.), lamellis subdistantibus, ochraceo-flavidis, arcuatis, decurrentibus. Spor. $16-18 \times 6-8 \mu$.

On stumps (?). Melbourne. (Reader, 34.)

Agaricus (Inocybe) Victorix, Cke. & Mass.

Pileo carnosulo, obtuse umbonato, convexo, demum explanato, albido, viscido, glabro, nitido, disco sordido (circa 1 unc. diam.), stipite subæquali, vel deorsum leviter incrassato (2 lin. crass.) albo, glabro, faretto; lamellis confertis, primo adnexis, sinuatis, demum subliberis, pallidis, demum umbrinis; sporis lævibus $12 \times 7-8 \mu$.

On grassy ground. Victoria. (F. Reader, 26.)

Agaricus (Psilocybe) Ceres, Cke. & Mass.

Pileo convexo, demum expanso, vix umbonato, tenui, lævi, glabro, testaceo (circa 1 unc. lat.), stipite elongato (4 unc.), fibrilloso, faretto, ochraceo, deorsum tomentoso (2-3 lin. crass.), lamellis

confertis, profunde sinuatis, ventricosis, cinereis, nebulosis, atrofuscescentibus, sporis ellipticis $14-16 \times 6-8 \mu$.

On the ground. Melbourne. (*Reader*, 35.)

****Lentinus gracilentus*, Cke. & Mass.**

Pileo tenui, submembranaceo, infundibuliformi, ochraceo, glabro, (1 unc. diam.), stipite gracili, fusco, glabro, nitido (2 in. long, 1-2 lin. crass.), lamellis profunde decurrentibus, vix confertis, sicco fuscis, acie serrulatis. Sporis $8 \times 5 \mu$.

On wood. Harkaway Range, Victoria. (*C. French*.)

****Merulius infundibuliformis*, Cke. & Mass.**

Tremellosus, magnus (5-6 unc. diam.), stipitatus. Pileo profunde infundibuliformi, crasso, lævi, sicco ruguloso, margine obtuso crispato, stipite brevi, crasso (1 unc. long, 1 unc. crass.) sulcato-rugoso, deorsum discoideo-expanso, hymenio poroso, acie denticulato, poris superne elongatis, irregularibus, angulatis, subtubæformibus, inferne abbreviatis, reticulatis, sporis profusis, ellipticis, aureofuscis $12 \times 8 \mu$.

Apparently on wood. Yarra. (*Miss Campbell*.)

An extraordinary species, of an uniform dark-brown colour when dry, wholly tremelloid and gelatinous when living, becoming hard and horny when dried. We have had an imperfect specimen of another stipitate species from South Africa, but the material was insufficient for diagnosis.

****Bovista hyalothrix*, Cke. & Mass.**

Cortex very thick and fibrous, forming a persistent base to the peridium like the cup of an acorn, peridium ($1-1\frac{1}{2}$ inch diam.) minutely rugulose, dehiscing by a small apical aperture. Spores umber in the mass, globose, coarsely spinulose, $10-12 \mu$ diam. Threads of capillitium simple, firm, much curled and interwoven, colourless, equal, about $5-6 \mu$ diam.

On the ground. N.W. of Lake Allacutya, Victoria. (*French*.)

Allied to *B. circumscissa*, B. & C., and *B. juglandiformis*, B.

****Cycloderma platyspora*, Cke. & Mass.**

Ovata, ad apicem subumbonata. Peridio exteriori crasso, flexili, continuo, lævi, ochraceo; peridio interiori tenui, nitido, columella conica vel clavata, ad centro producta; capillitio sporisque cinereo-lilacino, radiante, hyphis simplicibus, pallidis, sporarum diametro æqualibus, sporis globosis, minute granulato-asperulis, pallide griseis, 8μ diam.

On ground. Near Melbourne. (*F. Reader*, 59.)

***Geaster Readeri*, Cke. & Mass.**

Exoperidio tenui, 7-9 fidi, laciniis acuto-triangularibus, inæqualibus; intus umbrinis; endoperidio substipitato, globoso, tenui, ochraceo-umbrino, ore fimbriato (nec lineo circumscripto) vix prominulis. Sporis capillitioque obscure umbrino, hyphis simplicibus, pallidis, apice attenuatis, quam sporis crassioribus. Sporis globosis, lævibus, fuscis 3μ diam. *Geaster australe*, *Reader*.

On the ground. Melbourne. (*Reader*, 37.)

***Licea spumarioidea, Cke. & Mass.**

Æthalia irregularia, cinerea, cortex membranacea, venis ramulosis reticulata, sporangiis mox diffluentibus, capillitio obsoleto. Sporis majusculis, sphaericis, rotundato-verrucosis, flavis 16-18 μ .

Running over twigs and on the ground. Near Melbourne. (*Reader*, 15).

***Hemiarcyria fuliginea, Cke. & Mass.**

Hyphis anastomosantibus, spinulosis (3-4 μ diam.), spinulis unilateralibus, spiraliter dispositis; sporulis globosis, glabris, vix decoloratis (8 μ diam.). Capillitio sporisque in massam fuligineo.

On leaves of *Atherospermum*. Mount Wilson, N.S.W. (*Hamilton*, 646.)

Imperfect, the peridia being destroyed, and nothing remaining but the mass of capillitium and spores.

***Uromyces Orchidearum, Cke. & Mass.**

Epiphyllus, erumpens. Acervulis bullatis, demum fissuratis, fuscis. Telentosporis subglobosis, longe pedicellatis, lætæ fuscis, apice apiculatis (40 \times 30 μ). Episporio crasso, hyalino, sporophoris crassiusculis duplo longioribus, deorsum attenuatis.

On leaves of *Chiloglottis diphylla*. Mount Victoria. (*Hamilton*, 659.)

***Puccinia Wurmbeæ, Cke. & Mass.**

Soris elongatis, bullatis, atrofuscis. Uredosporis ellipticis, granulatis, fuscis 25-28 \times 15-18 μ . Telentosporis clavatis, uniseptatis, leniter medio constrictis, loculo superiore convexo, truncato-ve, obscuriori, loculo inferiori triquetro, deorsum in stipite hyalino attenuato, episporio lævi, 60-70 \times 20-25 μ .

On leaves of *Wurmbea dioica*. Beltana, Australia. (*Mrs. Richards*.)

***Asterina (Asteridium) Eucalypti, C. & M.**

Densissime gregaria. Peritheciis minutis, discoideis, applanatis, atris. Ascis tetrasporis, pyriformibus, sporidiis elongato-ellipsoideis, triseptatis, constrictis, fuscis, loculo penultimo incrassatis, 28 \times 10 μ .

On dead leaves of *Eucalyptus amygdalina*. Melbourne. (*Reader*, 47.)

***Rhizina ferruginea, Phillips.**

Apothecia orbicularia, sessilia, concava, demum subapplanata, margine integro, leniter elevato vel incurvo, hymenio fuligineo-fusco, extus tomentello ferrugineo-fusco, ascis cylindraceo-clavatis, sporidiis ellipticis, uni-vel biguttulatis, asperulis (20-23 \times 4-5 μ) paraphysibus superne incrassatis, septatis.

On dead wood. Victoria, Australia. (*C. French*.)

Cups $\frac{1}{2}$ to nearly 1 in. broad; rigid when dry, gelatinous and tough when moist. Very nearly allied to *Rhizina Thwaitesii*, B., but the sporidia do not approach fusiform, and the exterior is not clad with the black hairs of that species.

Ombrophila terrestris, *Phillips*.

Orbicularia, sessilia, gelatinosa, concava vel applanata, margine integro, erecto, hymenio umbrino-fusco, extus pallidiore, glabro. Ascis cylindraceo-clavatis, sporidiis elliptico-fusiformibus, glabris, uniguttulatis ($18-20 \times 7-10 \mu$) paraphysibus filiformibus, supra leniter incrassatis.

On the earth. Near Melbourne. (*Reader*, No. 25.)

Cups 3-6 lines broad, clear, umber-brown, a little paler externally. There is a distinct gelatinous stratum between the sub-hymeneal tissue and the pseudo-parenchyma.

***Phoma viminalis**, *Cke. & Mass.*

Epiphylla. Peritheciis immersis, erumpentibus, atris, subglobosis, perforatis. Sporulis minutis, hyalinis, continuis, ellipsoideis, $3-4 \times 1\frac{1}{2}-2 \mu$.

On leaves of *Eucalyptus viminalis*. Melbourne. (*Reader*, 7.)

***Phoma Lythri**, *Cke & Mass.*

Epiphylla. Peritheciis sparsis vel gregariis, globosis, tectis, prominulis, demum erumpentibus, pertusis. Sporulis globosis, hyalinis, 10μ diam.

On fading leaves of *Lythrum hyssopifolia*. Melbourne. (*Reader*, 56.)

***Sphæropsis tritici**, *Cke. & Mass.*

Peritheciis minutissimis, dense gregariis, primo tectis, punctiformibus, atris; sporulis ellipticis, continuis, læte fuscis, $12 \times 7-9 \mu$.

On dead leaves of wheat and on the sheaths. Melbourne. (*F. Reader*.)

***Sacidium eucalypti**, *Cke. & Mass.*

Amphigenum. Peritheciis gregariis, erumpentibus, minimis, applanatis, atris, mox superne deficientibus, sporulis globosis, continuis, hyalinis, $5-6 \mu$ diam.

On dead leaves of *Eucalyptus globulus*. Melbourne. (*Reader*, 8.)

***Protostegia eucalypti**, *Cke. & Mass.*

Epiphylla. Receptaculis immersis, cupulæformibus, gelatinosis, aurantiis, epidermide demum fissurato tectis. Sporulis obelavatis, sigmoideis, curvulisve, elongatis, hyalinis, continuis ($60-90 \times 3 \mu$). Sporophoris brevissimis.

On dead leaves of *Eucalyptus incrassatus*. Melbourne. (*Reader*, 24.)

Melasmia eucalypti, *Cke. & Mass.*

Maculis orbicularibus vel confluentibus (2 mm. diam.) atris; peritheciis paucis, subgregariis, ellipticis lanceolatisve, rima deliscentibus, dein hysteriori-formibus; sporulis lanceolatis, utrinque acutis, continuis, hyalinis ($25 \times 6 \mu$) basidiis subelongatis, simplicibus, hyalinis.

On dead leaves of *Eucalyptus*. Brisbane. (*Bailey*, 488.)

Glæosporium glaucum, *Cke. & Mass.*

Maculis suborbicularibus, epiphyllis vel amphigenis, glaucescentibus, subfarinosis, pustulis minutis, conidiis profusis, mox

extrusis, strato effuso farinaceo efformantibus, globosis, hyalinis 6-7 μ diam.

On living leaves. Brisbane. (*Bailey*, 486).

Oospora aphides, *Cke. & Mass.*

Hyphis brevibus, continuis, subcæspitosis, hyalinis; conidiis catenulatis, limoni-formibus, utrinque apiculatis, primo guttulatis, hyalinis, albis, 17-19 \times 12 μ .

On aphides upon pumpkin leaves (*Cucurbitaceæ*). Brisbane. (*Bailey*, 584.)

***Sepedonium aureofulvum**, *Cke. & Mass.*

Hyphis repentibus, ramosis. Conidiis globosis, profusis, pulvere aureo-fulvo in Polyporeis insidentibus, episporio tenui, minute asperulo (9 10 μ diam.)

On *Polyporus*. Mordialloc, Victoria. (*French*.)

***Harpographium corynelioides**, *Cke. & Mass.*

Cæspitosum, crumpens, atrum (*Corynelia* simulans) stipitibus compositis, radiantibus, ad basim connatis, sursum clavatis, vel subulatis, simplicibus vel furcatis (2-3 mm. long.) Cæspitulis 1 cm. long, 5 mm. lat. Hyphis deorsum dichotomis, fuligineis, sursum ramosissimis, hyalinis, septatis, conidiis cylindræcis, curvulis (allantoideis) nucleatis, hyalinis, 12 \times 3 μ .

On branches of *Leptospermum juniperinum*. Port Phillip (*Hamilton*.) Harkaway Range. (*C. French*.)

Dendrodochium ellipticum, *Cke. & Mass.*

Sporodochiis pulvinatis, erumpentibus, oblongis, pallidis ($\frac{1}{2}$ -1 mm. long) convexis; conidiis ellipticis (8 \times 5 μ) hyalinis, basidiis sursum furcatis.

In ligno putrido. Waitaki. N. Z. 290.

Fusarium (Selenospora) hypocreoides, *Cke. & Mass.*

Sporidochio convexo, pulvinato, hypocreaformi (1 mm. diam.) aurantio, subdiscoideo. Conidiis fusoides, continuis, hyalinis, 15 \times 3 μ .

On fading leaves of *Ficus aspera*. Brisbane. (*Bailey*, 589.)

POLYSACCUM.

In the revision of *Polysaccum*, p. 27, note the following species was omitted.

P. australe, *Lev. Ann. Sci. Nat.*, Ser. 3, v. 9, p. 136, pl. 9, f. 34.

Stem rooting, subcylindrical, even, shining, blackish-brown, dilated into a similarly coloured subglobose tuberculato-arcolated peridium; peridiola brown, subglobose, near the periphery lenti-form, compact; spores fawn-coloured, spherical, smooth.

On the ground. New Holland. About 9 cm. high.

Owing to the priority of Leveille's name, the species described as *P. australe*, *Cke.*, *Grev. v.*, 16, p. 29, will be changed to *P. confusum*, *Cke.*

P. cranium, *Lev. l. c.*, p. 136. = *Scleroderma bovista*, *Fr.*

NEW BRITISH FUNGI.

By M. C. COOKE.

(Continued from p. 49.)

Agaricus (Armillaria) Jasonis, Cke. & Mass.

Cæspitose. Pileus rather fleshy, especially at the disc, campanulate then expanded, with a distinct rounded umbo, granularly papillate, golden yellow, becoming reddish at the apex (3 in. diam.), margin appendiculate with the fibrous veil. Stem nearly equal, or a little thickened below (2-3 in. long, $\frac{1}{4}$ - $\frac{1}{3}$ inch thick), of the same colour, squamose below the torn squarrose ring, which is rather distant; hollow, gills adnate, scarcely crowded, thin, white, then pallid. Spores $8 \times 5 \mu$. Odour strong.

On stumps. Carlisle. (Dr. Carlyle.)

With just the habit of many species of *Pholiota*, but with white gills and spores.

Peniophora hydroides, Cke. & Mass.

Thinly effused, indeterminate, pale cinereous, covered with paler teeth, or tufts resembling the teeth of a Hydnum, which, under the microscope, are found to be fascicles of metuloids, colourless, attenuated upwards, and rough, $70-120 \times 12-14 \mu$. Basidia clavate, spores globose, hyaline, smooth, $4-5 \mu$.

On bark. Carlisle. (Dr. Carlyle.)

Bearing a great resemblance superficially to *Grandinia livida*.

Guepinia pezizæformis, Berk.

On branches. Carlisle. (Dr. Carlyle.)

Bovista olivacea, Cke. & Mass.

Globose, $1\frac{1}{2}$ -2 inches diam., with a short stout rooting base, cortex very thin and evanescent, peridium thick, at first soft and pliant like leather, becoming brittle and breaking away in patches, pale ochraceous, at length whitish; mass of spores, and very dense capillitium, bright citrine, then olive, threads thin, flaccid, simple, spores globose, smooth, pale yellow, sometimes pedicellate, 5μ diam.

On the ground. Durdham Down (*Herb. C. E. Broome in Mus. Brit.*), and Winmera, Vict. (F. Reader 62.)

Hypoxylon perforatum, Schwz. Sacc. Syll. 1431.

On dead stems of Indian corn. Kew.

Valsa oxystoma. Rehm. Sacc. Syll. 457.

On *Alnus autumnalis*. Kew.

Sphærella (Læstadia) veneta, Sacc. Syll. 1600.

On dead leaves of *Platanus*. Kew.

Asterina juniperina, Cke.

Seated amongst a subiculum of *Antennaria pinophila*. Perithecia discoid, convex ($\frac{1}{8}$ - $\frac{1}{10}$ mm. diam.), surrounded by radiating threads. Asci clavate, octosporous. Sporidia fusiform, triseptate, clear brown ($25 \times 7 \mu$).

On Juniper. Forres, N.B.

Phacidium humigenum, Cke. & Mass.

Excipulum becoming plane, opening with several irregular teeth, externally brownish (2 mm. diam.), disc yellowish-white or very pale yellow. Asci clavate-cylindrical, sporidia lanceolate with obtuse ends, or cylindrical, 1-3 nucleate, hyaline, $25-28 \times 6-7 \mu$. Paraphyses filiform, curved at the tips.

On damp ground amongst decayed leaves, twigs, &c. Carlisle. (Dr. Carlyle.)

Phoma nelumbii, Cke. & Mass.

Perithecia scattered, erumpent, soon becoming naked and prominent, subglobose, black, opaque ($\frac{1}{6}$ mm diam.). Sporules oval, continuous, hyaline, with a thick epispore and a distinct central nucleus ($10 \times 7 \mu$).

On fading stems of *Nelumbium speciosum*. Kew.

Phoma typharum, Sacc. Syll. 977.

On *Typha*. Kew.

Sphæropsis herbarum, Cke. & Mass.

Perithecia minute, gregarious, black, punctiform, at first covered, then exposed by the falling away of the cuticle. Sporules broadly elliptical, continuous, brown with a tinge of purple, $7-10 \times 5-6 \mu$.

On herb stems. *Compositæ* and *Umbelliferae*. Epping.

Sphæropsis alni. C. & E. Sacc. Syll. 1686.

On *Alnus*. Kew.

Hendersonia Planeræ, Cke. & Mass.

Scattered, perithecia erumpent, subglobose, black, for a long time covered by the cracked cuticle, conidia elliptical, rounded at the ends, triseptate, a little constricted, brown, $30 \times 10-12 \mu$.

On twigs of *Planera*. Kew.

Allied to *H. vagans*, Fekl.

Chromosporium rubiginosum (Carm.), C. & M.

Epiphyllous, rust coloured, in effused patches, pulverulent, conidia profuse, oval, continuous, pale fuscous, $10 \times 7-8 \mu$. *Gymnosporium rubiginosum*, Carm. MSS.

On decayed leaves of Beech. Appin.

Monilia pruinosa, Cke. & Mass.

Forming a broadly effused thin white pruinose stratum, threads flexuous, elongated, septate ($10-12 \mu$ diam.), irregularly branched, conidia shortly catenulate, subglobose, or oval, hyaline, $14-15 \times 12 \mu$.

On fading leaves of *Caladium*. Kew.

Monosporium olivaceum, Cke. & Mass.

Broadly, and for the most part densely, effused, olive; hyphæ interwoven, septate, pale olivaceous, fertile branches erect, sparingly branched towards the apex, branchlets sometimes alternate, sometimes in pairs, conidia hyaline, colourless, oval, $6-8 \times 4 \mu$.

On *Corticium* and bark. Carlisle. (Dr. Carlyle.)

Botrytis (Polyactis) gonabotryoides, Cke. & Mass.

Whitish. Hyphæ gregarious, but not fasciculate, erect, simple or furcate, septate, pale olive below, conidia elliptical, continuous, hyaline, $15 \times 7-8 \mu$, in subglobose apical clusters, and also in three or four similar clusters at various heights around the septa of the hyphæ, but the joints are not swollen, conidiophores short, and crested at the apex.

On dead leaves of *Hypericum calycinum*. Kew.

Verticillium ampelinum, C. & Mass.

White, caespitose. Threads erect, sparingly branched, ultimate branches mostly ternate, attenuated to the apex, septate, conidia elliptic, hyaline, continuous, $10 \times 4 \mu$.

On vine knots. Herbarium ground. Kew.

Coniosporium carbonaceum (Carm.).

Epiphyllous, effused, resembling patches of *Fumago*, black, opaque, conidia oval or lemon-shaped, like spores of some species of *Chaetomium*, continuous, brown, opaque, $10 \times 12 \mu$. *Gymnosporium carbonaceum*, Carm. MSS.

On leaves of *Spiraea ulmaria*. Appin.

Torula nucleata, Cooke.

Forming small, irregular, thinly effused, blackish patches, mycelium creeping, threads with an attenuated hyaline base, above resolved into 6-8 subglobose concatenate conidia, which remain for a long time united. Conidia dark brown, subglobose, with a large nucleus, $10-12 \mu$ diam.

On herb stems. Shroffeld's Wood. (F. Currey.)

Periconia repens, Cooke.

Forming small black tufts. Threads short, flexuous, simple or shortly branched, closely septate, especially upwards, where the cells are about equal in length and diameter, pale brownish above but hyaline at the base, $8-10 \mu$ diam. Conidia solitary, apical, globose, opaque, dark brown, $20-25 \mu$.

On herb stems. Chislehurst. (F. Currey.)

Monotospora asperospora, Cke. & Mass.

Effused, black, forming thin velvety patches. Threads erect, short, attenuated upwards from the discoid base, without septa, opaque and dark brown below, pale above. Conidia globose, rough with minute warts, brown, $24-28 \mu$ diam.

On dead twigs of *Clematis*. Shere.

Acremoniella pallida, Cke. & Mass.

Somewhat effused, forming pallid spots on dead leaves, mycelium creeping, hyaline, fertile threads short, erect, septate, hyaline, with short lateral, acuminate branches. Conidia terminal, ovate, continuous, clear brown ($30-35 \times 25 \mu$).

On dead leaves (elm?). Eastbourne. (C. J. Muller.)

Scolecotrichum phomoides, Cke. & Mass.

Amphigenous. Tufts minute, black, sub-orbicular, punctiform, resembling some *Phoma*. Threads erect, simple, slender, fascicu-

late at the base, septate short, pale olive, conidia uniseptate, elliptical, hyaline, $6 \times 2\text{--}3\ \mu$.

On dead leaves of *Ophtopogon japonica*. Kew.

Cladosporium juglandinum, Cke.

Hypophyllous. Tufts small, scattered, fuliginous. Threads septate, nodulose, rather flexuous, dark brown below, paler above, mostly simple. Conidia acrogenous, fusiform, uniseptate, translucent, $35 \times 9\ \mu$.

On fading walnut leaves. Highgate.

Cladosporium orchidearum, Cke. & Mass.

Tufts erumpent, small, originating principally through the stomata, olivaceous. Threads short, sparingly branched, septate, rather slender and flexuous. Conidia elliptical, uniseptate, pale olive, $17\text{--}18 \times 5\text{--}6\ \mu$.

On leaves of orchids. Kew.

Cladosporium algarum, Cke. & Mass.

Effused in irregular dark olive patches. Threads erect, sparingly branched, septate, olive below, pale above and attenuated. Conidia oblong, cylindrical, 1-3 septate, slightly constricted, pale olive, $30\text{--}35 \times 10\ \mu$.

On fronds of *Laminaria flexicaulis*. Near Hastings. (E. M. Holmes.)

Helminthosporium minimum, Cooke.

Thinly effused, black. Threads simple, erect, septate, rather thicker than the diameter of the conidia; conidia fusiform, obtuse at the ends, triseptate, scarcely constricted, hyaline, $12\text{--}14 \times 3\text{--}4\ \mu$.

On dead decorticated branches. Near Hereford (1876).

Heterosporium laricis, Cke. & Mass.

Tufts scattered, suborbicular, woolly, fuliginous. Threads thick, septate, with the joints ventricose ($15\text{--}18\ \mu$ thick), conidia 1-3 septate, elliptical, obtuse at the ends, verruculose, pale fuliginous, $50\text{--}60 \times 20\ \mu$.

On larch leaves. Norfolk.

Heterosporium typharum, Cke. & Mass.

Tufts elongated, erumpent, gregarious, fuliginous. Threads erect, mostly simple, septate, nodulose, conidia 1-3 septate, elliptical, somewhat acute at each extremity, rough with small granules, pale olive, $30\text{--}40 \times 10\text{--}14\ \mu$.

On leaves of *Typha angustifolia*. Kew.

Heterosporium epimyces, Cke. & Mass.

Olive, effused in more or less dense velvety patches. Threads sparingly furcate, often simple, flexuous, sparsely septate, pale fuscous, conidia 1-3 septate, elliptical, minutely verrucose, pale olive, $25\text{--}30 \times 8\ \mu$.

On *Polyporus squamosus*. Highgate.

On *Bolctus felleus*. Forest of Dean.

Hacrosporium alliorum, Cke. & Mass.

Effused in thin fuliginous patches. Hyphae flexuous, simple, septate, nodulose, collapsing when dry. Conidia elliptical, triseptate.

tate, then transversely and longitudinally divided into quadrate muriform cells, amber coloured with a tinge of olive, $40-50 \times 20-25 \mu$.

On onion leaves. E. Bergholt (Bloxam.)

Macrosporium scolopendri, Cke.

Spots brown, orbicular or irregular. Tufts small, scattered over the tufts, olive. Threads short, seldom branched, septate, slender. Conidia 3-4 septate, with one or two transverse septa, pale brown ($40 \times 15 \mu$).

On fading fronds of *Scolopendrium vulgare*. Irstead.

Stilbum citrinellum, Cke. & Mass.

Minute, scattered, stem erect, cylindrical, whitish, head subglobose, lemon-yellow, a little attenuated upwards; compacted threads furcate at the tips; conidia solitary, elliptical, continuous, hyaline, $7-9 \times 4 \mu$.

On fading leaves of *Lycopodium*. Kew.

Whole plant about 2 mm. high.

Stilbum nigripes (Carm.) Cke.

Minute, capitulum nearly globose, whitish, stem capillary, black (2 mm. long), smooth, rather rigid, conidia hyaline, globose, $4-5 \mu$ diam. *Isaria nigripes*, Carmichael in Herb. Kew.

On dead oak leaves. Appin.

Coremium vulpinum, Cke. & Mass.

Sparsum, ochraceum. Hyphis fasciculato-concretis, erectis, septatis, superne ramulosis, conidiis ellipticis, uniguttulatis, concatenatis, hyalinis, $10 \times 5 \mu$. Capitulis compactis, muco hyalino involutis.

On wolf's dung. Hook. Herb. No locality stated.

Isaria muscigena, Cke. & Mull.

Pallid. Stroma erect, simple, or forked and compressed (1-2 lines high), gregarious, but not fasciculate. Conidia large, sphaeroidal, $9 \times 8 \mu$, hyaline.

Amongst *Hypnum serpens* on trunks. Eastbourne. (C. J. Muller.)

Haplographium graminum, Cke. & Mass.

Solitary, scattered, minute. Stem composed of fasciculated pale olive septate threads, spreading and free above. Conidia fusiform, binucleate, hyaline, $12 \times 5 \mu$.

On straw. Hampstead.

Ægerita virens, Carm.

Scattered, granuliform, minute, olive, hemispherical; sporophores fasciculate at the base, radiating, rather thick, flexuous, simple or dichotomous, often clavate at the tips, conidia acrogenous, globose, pale olive, as well as the sporophores, 15μ diam.

On birch bark. Appin. (Carmichael.)

Fusarium diffusum, Carm.

Effused, orange, conidia fusiform, acuminate, slightly curved, especially at the extremities, 3-5 septate, hyaline, $60-70 \times 3 \mu$.

On stems of thistles. Appin; near *F. roseum*.

NOTES ON HYMENOMYCETES.

BY THE EDITOR.

We have already alluded, very casually, to Professor Saccardo's fifth volume of his "Sylloge," which contains the first part of the *Hymenomycetes*. We return to it now for the purpose of one or two observations, preliminary to our succeeding remarks, rather than for criticism. In the first place we congratulate Saccardo in not adding the dimensions of the spores (where he gives them) to the original diagnoses, except in such cases as those of recently described species in which the spore measurements are constituted a part of the original diagnosis. A distinct protest must be offered to the custom, now so common, of attaching spore dimensions to a species without any evidence that the spores belong to the species originally described, but are only added from specimens determined by the parties themselves, and which they fancy, or believe to be, the species of some particular author who has not given spore measurements. This is altogether a delusion and a snare, and such dimensions have no authority whatever, and cannot be accepted as positively the spores of the species in question. The only good and authentic spore measurements are those given by the author himself, or obtained from authentic typical specimens. Mr. Brown or Mr. Jones may give the dimensions of the spores of *Agaricus cincinnatus*, Fries, for instance, not from authentic specimens, but from something collected by himself, and which he considers may be the *A. cincinnatus* of Fries, but also may be something quite different. Neither Mr. Brown nor Mr. Jones has any right to assume that his specimens are so indubitably the species of Fries that he is at liberty to amend or add to the diagnosis the dimensions of the spores. In order that such spore measurements may have due value they should be derived from *authentic* specimens, and the fact stated, otherwise the specimens from which the spores are taken should be accurately and satisfactorily figured with their spores, and thus some plausible ground afforded for the determination. In the next place we must express our sympathy with Saccardo in a difficulty in which he was placed in carrying out his design of furnishing diagnoses of all described species. Of course, he could not act invidiously and exclude a long series of new species, however doubtful he might feel of their value, although in very many cases the diagnoses are so wretchedly imperfect, and the illustrative figures (when given at all) so crude and partial, that five per cent. of them will represent the most that will ever be recognized again by anyone except the author himself. In one instance, which we may particularise, there are scores of supposed new species, all by the same hand, which it would be impossible to identify, either by the short descriptions or the wretched figures, or by both of these combined. That this was felt by Saccardo will be manifest by his lumping together

at the close of a section a string of these species, the affinities of which neither himself, nor anyone else, could possibly guess from the scant materials at his disposal; that he has done his best under untoward circumstances does not exonerate the original author from blame for his slovenly and slipshod work, which was worth doing well if it was worth doing at all.

A recent writer, as a sort of apology for his figures being different from others which have been published of the same species, remarks that climate must have some influence on *Agarics*, and that they may be expected to vary more or less considerably in different countries. Now, within certain limits this may probably be true, for we have heard fungus-hunters lament that *Agarics* will not grow constantly according to the books. Perhaps it is this variability, carried a little to extremes, which accounts for the eccentricities of Bavarian *Agarics*. It is, nevertheless, rather strange to our experiences in this country to find the section of an *Agaric* showing the gills rounded behind on one side and decurrent on the other, or broadly adnate on one side and free on the other, or with the gills twice as broad on one side as on the other, or on one side broadest in front and on the other broadest behind. Yet these eccentricities are manifested in Britzelmayr's figures. It cannot, therefore, be surprising that so many species common with us are so metamorphosed that one cannot recognize them under the same name in this remarkable atlas. Surely it cannot be that all the blame is to be attributed to the variability of *Agarics* in the "sunny south;" or, if so, then the atlas is of no use to us in this "cold northern clime," where *Agarics* grow more in harmony with what were described and figured by Fries. Seriously, these crude figures scarcely merit sober criticism, as they never could have been intended for practical purposes.

Without pretending either that all our own figures in the "Illustrations" are equally good or typical, or that we have never fallen into error in the determination of species, we are bound to notice two or three which have come under condemnation.

Agaricus (Inocybe) cincinnatus, Fr., "Illustrations," t. 425, is figured with rough spores, wherefore Bresadola concludes that it is wrong (p. 101), and that his species with smooth spores is the species of Fries, for which he calls M. Quelet to witness, because he "was for many years in correspondence with Fries," and, of course, should know; the interpretation of which is—that Quelet considers *A. cincinnatus*, Fr., to be a species with smooth spores, and Bresadola, accepting it, denies that t. 425 can be the species of Fries—and this is all the evidence. On the other hand, we have before us in the Berkeley Herbarium about twenty-six specimens of this species from various localities, and all with rough spores. Our determination is, therefore, in accord with Berkeley, who, by-the-by, is by far the oldest and most experienced mycologist in Europe, and "was for many years in correspondence with Fries," even before the first edition of the

"Epicrisis," dated 1836 (see p. 117). What was Dr. Quelet doing with Fungi 52 years ago? Was he then in correspondence with Fries? We fancy not, but that his occupation at that period was of a more puerile character. If, moreover, Quelet was so convinced of the accuracy of his knowledge of *Ag. cincinnatus*, Fr., why was it that he figured it (Pl. xii., Fig. 3) in his "Champignons du Jura" under the name of *Inocybe dulcamarus*, and (Pl. xii., Fig. 4) *Ag. dulcamarus* as *Inocybe cincinnatus*, Fr., as pointed out by Mr. Berkeley in "Annals of Natural History" (1878, under number 1654), and, we presume, since corrected it? If Bresadola is right, and Quelet must be accepted because he "was for many years in correspondence with Fries," by the same reasoning Berkeley must be more accurate still, because he "was for many years in correspondence with Fries" before Quelet had any knowledge of Fries or Fungi.

Agaricus (Inocybe) lanuginosus, Bull., "Illustrations," t. 582, Fig. A., figured with smooth spores. Bresadola says that this must be a form of *Ag. dulcamarus*, A. & S., at least he supposes so, but without assigning a reason, probably also because M. Quelet says so. There are sixty specimens of this in the Berkeley Herbarium agreeing with the figures and spores in the "Illustrations," and, with all deference both to M. Quelet and M. Bresadola, we accept the authority (if it is to be a question of authority) rather of Mr. Berkeley than of either, because he was for more than fifty years "in correspondence with Fries." If M. Bresadola or M. Quelet can produce an authentic specimen of *Ag. lanuginosus* either from Bulliard or Fries, with rough spores, we will at once admit that Berkeley and ourselves have been in error. It may be added that Bresadola declares that our figure of *Ag. cincinnatus* (t. 425 B.) is a form of *Ag. lanuginosus*, Bull., which he says has often a "bluish tinge when young," but upon what authority is this stated as a fact?—not of Fries or Bulliard, but (perhaps) of Quelet or Bresadola, whence it may be inferred that *theirs* is not the genuine species.

Agaricus (Inocybe) carptus, Scop., "Illustrations," t. 426. This is figured with smooth spores, and, like the preceding, accords with the determinations of Berkeley. Bresadola thinks that everybody else has been wrong, and his interpretation of Scopoli's species is the only accurate one; moreover, that our figure is only a form of *Ag. plumosus*, Bolton, and, being an Englishman, it is only natural that an Austrian should know his species better than any two Englishmen can do.

This same critic ventures also to determine that the *Ag. analogicus* of Britzelmayr is the same as the species which he regards as *Ag. carptus*. In one sense he is more fortunate than ourselves, for we have never been able to find this Fig. 148 in our copy of Britzelmayr, and had we done so probably could have learnt nothing from it. Bresadola's own figures certainly do not represent the species which Fries had in view, but that is of very

little consequence in the opinion of some persons, though fortunately not yet the majority.

This leads us to inquire what are the features upon which some, at least, of the new and "shining lights" in mycology base the determination of species. Certainly they have wandered from the Friesian method most considerably. With an atlas before us, illustrative of the new method, containing some hundreds of coloured figures, we fail to discover the secret. It cannot be *colour*, for in the matter of colour there is but little variety, and coloured stems, according to description, are colourless in the figures. This is very provoking in *Cortinarius*, for example, wherein there formerly was held to be some virtue in a coloured stem. And, again, sections are, as a rule, all white, but our crude experience of *Agaricini* tends to the conclusion that the flesh of all the species is not uniformly white and immutable. But if not colour, can it be form or general contour? And, again, we discover that form is of little avail, since one after another in the diagnosis of new species there is but vague indication of form, and this is not always in agreement with the type figure.

Let us take a species at random, and opening at *Cortinarius insignis*, Britz., we find it thus described:—"Pileus campanulate, lilac flesh colour, stem of the same colour, gills sufficiently numerous, lilac, reddish yellow, flesh whitish, pallid violet, spores $8.9 \times 6 \mu$." In addition to this masterpiece of brevity we are referred to Fig. 144, and told that the size is "Pileus 7 cm. diam., stem 6 cm. long, $1\frac{1}{2}$ cm. thick." Turning to the figure we find a small species delineated, which is wholly white, with a pileus 1 cm. broad, a stem 2 cm. long and about 4 mm. thick, and yet all the figures are supposed to be "natural size." We would inquire—How can anyone identify such a *new species*? The pileus is campanulate, but white according to the figure; the stem is thickened downwards and of the same colour. And as to the gills, of course they are of no consequence; the diagnosis does not hint whether they are adnate, decurrent, sinuate, emarginate, or free, and whether the stem is stuffed, hollow, or solid is left an open question. There is but one definite clue to the species, "spores $8.9 \times 6 \mu$," and this is evidently the crucial test. Here beams a light upon the royal road to success in the determination of *Agaricini*, as preached by the new apostles. The size of the spore is to determine the species, free from all the trammels of external character. This is the plain inference to be derived from more than one of the latest adventurers in the career of species making. This is carrying to the extremity of abuse the carpological system, which, though applied by Saccardo himself in his fifth volume with reason, moderation, and good sense, he would blush to own when united to such extravagance.

If spore measurement is to be the "Alpha and Omega" in the determination of the *Agaricini*, we should at least be certain that *authentic specimens* only of the older species (for which spore

measurements are not given with the diagnosis) are propounded as types, and also that the individuals giving measurements from such types are reliable, and capable of giving accurate measurements of such minute bodies. It is one thing to be able to see an object of 2 or 3 μ in diameter under the microscope, but quite another thing to measure the dimensions accurately. As an example of the truth of this anyone can refer for himself to authorities for the dimensions of the spores in three or four of the best known species, and compare the dimensions given by different authorities from their own determinations. The result will be that there will be found to be no absolute agreement between any two persons, except where one has copied (apparently) from the other. Take the following instances for what they are worth :—

Coprinus comatus, Fries.

- 11-13 \times 6-8 μ . Karsten.
- 12-14 \times 6-8 μ . Britzelmayr.
- 10-13 \times 6-8 μ . Bizzozero.
- 18 \times 11 μ . W. G. Smith.
- 14 \times 8 μ . Cooke Illus. t. 658.
- 15 \times 9 μ . G. Massee in Herb. Kew.

Coprinus atramentarius, Fries.

- 6-10 \times 4-6 μ . Britzelmayr.
- 9 \times 6 μ . Cooke Illus. t. 662.
- 9-10 \times 6 μ . Bizzozero.
- 9-10 \times 6 μ . Karsten.
- 12 \times 6 μ . G. Massee in Herb. Kew.
- 9-10 \times 6 μ . Saccardo.

Coprinus finetarius, Fries.

- 15-18 \times 9-12 μ . Karsten.
- 15-18 \times 9-12 μ . Bizzozero.
- 10-12 \times 6-8 μ . Britzelmayr.
- 12 \times 10 μ . G. Massee in Herb. Kew.

Coprinus plicatilis, Curtis.

- 8-11 \times 5-9 μ . Saccardo.
- 8-10 \times 5-8 μ . Britzelmayr.
- 14 \times 10 μ . G. Massee in Herb. Kew.

From these, and similar examples which might be added indefinitely, it is clear that the spores are exceedingly variable in size in the same species, and therefore of no value in the determination of species; or else, not being themselves variable, that the sizes given indicate inaccurate measurement on the part of all observers but one, it follows that, until it is determined which is the accurate authority, spore dimensions are equally useless, and not only useless but misleading. Before there is any justification for the recognition of spore measurement as part of the diagnosis of a species, some better method for obtaining accuracy must be devised, it being perfectly clear that the present haphazard system is a discredited failure.

SYNOPSIS PYRENOMYCETUM.

(Continued from p. 56.)

Fam. 10. PERTUSÆ. Perithecia emergens, glabra, basi appllanata, adnata, vel subimmersa, ostiola papillata, vel pertusa.

GEN. 1. **CONISPHÆRIA**. Sporidia hyalina, continua, vel septata.

* ZIGNOINA. *Sporidia continua*.

- | | |
|--|---------------------------------------|
| 3326. subcorticalis, <i>Cooke</i> 7063 | 3329. rhodobapha, <i>B.</i> ♂ |
| 3327. crustacea, <i>Karst.</i> 3654 | Br. ... 3659 |
| 3328. populicola, <i>Cr.</i> ... 3656 | 3330. tingens, <i>Ces.</i> ... 3660 |
| | 3331. verrucarioides, <i>Cr.</i> 3662 |

Incertæ.

- | | |
|-----------------------------------|--|
| 3332. picastra, <i>Fr. Scler.</i> | 3333. palmicola, <i>Fr.</i> ... 4318 |
| <i>Succ.</i> 123 | 3333a. fuscescens, <i>Fr.</i> ... 4324 |

** MELANOPSAMMA. *Sporidia uniseptata, hyalina*.

- | | |
|---|--|
| 3334. pæcilostoma, <i>B.</i> ♂ | 3343. Diana, <i>Speg.</i> ... 2271 |
| Br. ... 3652 | 3344. emergens, <i>Schulz.</i> 6516 |
| 3335. coffeicola, <i>B. & C.</i> ... 2252 | 3345. salicaria, <i>Karst.</i> ... 6085 |
| 3336. borealis, <i>Karst.</i> ... 2260 | 3346. picastra, <i>Schwarz.</i> ... |
| 3337. tenerrima, <i>Speg.</i> ... 2261 | 3347. cubigena, <i>Berk. in</i> |
| 3338. anaxæa, <i>Speg.</i> ... 2264 | <i>Herb.</i> ... 4323 |
| 3339. texensis, <i>Cooke</i> ... 2266 | = obtusissima, <i>B. & C.</i> |
| 3340. petruciana, <i>Cald.</i> 2267 | 3348. nipæcola, <i>Cke. & Mass.,</i> |
| 3341. glandis, <i>Duby.</i> ... 2268 | <i>Grav.</i> xvi. 92. |
| 3342. europæa, <i>Speg.</i> ... 2270 | |

** MELOMASTIA. *Sporidia bisseptata, hyalina*.

- | | |
|---------------------------------------|-----------------------------|
| 3349. graopsis, <i>Ellis</i> ... 6086 | = loniceræ, <i>Sow.</i> |
| 3350. Friesii, <i>Nke.</i> ... 3625 | = revelata, <i>B.</i> |
| = mastoidea, <i>Fr.</i> | = fraxinicola, <i>Curr.</i> |
| = opuli, <i>Fr.</i> | = emiliana, <i>Fab.</i> |

** ZIGNOELLA. *Sporidia pluriseptata, hyalina*.

† *Perithecia minuta*.

- | | |
|--|--|
| 3351. inflata, <i>Ellis</i> ... 3633 | 3355. soluta, <i>C. & E.</i> ... 3635 |
| 3352. eutypoides, <i>Sacc.</i> 3636 | 3356. subeutanea, <i>C. & E.</i> 3499 |
| 3353. cyrillicola, <i>B. & C.</i> 3267 | 3357. ceratispora, <i>B. & C.</i> 3178 |
| 3354. matthiicola, <i>Cke., Grav.</i> | 3358. hysterioides, <i>Curr., Grav.</i> |
| xvi. 92. | xvi. 92. |

†† *Perithecia majuscula.*

- | | |
|---|--|
| 3359. quercetis, <i>Oke. & Mass.</i> ,
<i>Grev.</i> xvi. 92. | 3370. nematasca, <i>S. & S.</i> 3673 |
| 3360. Morthieri, <i>Fckl.</i> ... 3663 | 3371. ramenticola, <i>Sch.</i>
<i>& S.</i> ... 7059 |
| 3361. corticola, <i>Fckl.</i> ... 3664 | 3372. minutissima, <i>Karst.</i> 6152 |
| 3362. prorumpens, <i>Rehm.</i> 3655 | 3373. salicicola, <i>Fab.</i> ... 6153 |
| 3363. subferruginea, <i>Fckl.</i> 3666 | 3374. transylvanica,
<i>Rehm.</i> ... 3674 |
| 3364. cryptarum, <i>Fckl.</i> 3667 | 3375. Dubyi, <i>Not.</i> ... 3675 |
| 3365. macrasca, <i>Sacc.</i> ... 3668 | 3376. snbvestita, <i>Ell. & Ev.</i> 7495 |
| 3366. emergens, <i>Karst.</i> ... 3669 | 3377. insculpta, <i>Fr.</i> ... 3676 |
| 3367. sequoiæ, <i>Plow.</i> ... 3670 | 3378. Ondemansii, <i>Karst.</i> 7066 |
| 3368. Maingayi, <i>Cooke</i> ... 3671 | 3379. paraguayensis ... 7067 |
| 3369. albocincta, <i>C. & E.</i> 3672 | |

GEN. 2. **TICOTHECIUM.** *Flot.* Perithecia minuta, licheni-
cola, sporidia septata, hyalina vel fusca.

* PHARCIDIA. *Sporidia 1-3 septata hyalina.*

- | | |
|---|---|
| 3380. Schaererii, <i>Mass.</i> ... 2232 | 3388. hygrophila, <i>Arn.</i> ... 6502 |
| 3381. parvipuncta, <i>Stein.</i> 6495 | <i>v. Berengeriana, Arn.</i> |
| 3382. constrictella, <i>Mull.</i> 6496 | 3389. porocyphi, <i>Stein.</i> 6503 |
| 3383. arthoniæ, <i>Arn.</i> ... 6497 | 3390. microspila, <i>Korb.</i> ... 6504 |
| 3384. aspiciliæ, <i>Lahm.</i> ... 6498 | 3391. conspurcans, <i>Fr.</i> ... 6505 |
| 3385. punctillum, <i>Arn.</i> ... 6499 | 3392. badiæ, <i>Arn.</i> ... 6506 |
| 3386. dispersa, <i>Lahm.</i> ... 6500 | 3393. tabaciæ, <i>Arn.</i> ... 6507 |
| 3387. lichenum, <i>Arn.</i> ... 6501 | 3394. ahlesiana, <i>Hepp.</i> ... 6508 |

** GENUINA. *Sporidia fusca.*† *Sporidia uniseptata.*§ *Asci 4-8 spori.*

- | | |
|--------------------------------------|--------------------------------------|
| 3395. gelidarium, <i>Mudd.</i> 6592 | 3400. calcaricolum, <i>Md.</i> 6597 |
| 3396. perpusillum, <i>Nyl.</i> 6593 | 3401. gemmiferum, <i>Tayl.</i> 6598 |
| 3397. stigma, <i>Korb.</i> ... 6594 | 3402. complanata, <i>Arn.</i> 6599 |
| 3398. macrosporum, <i>Hp.</i> 6595 | 3403. squamarioides, <i>Md.</i> 6600 |
| 3399. Arnoldi, <i>Hepp.</i> ... 6596 | |

§§ *Asci polyspori.*

- | | |
|--------------------------------------|-------------------------------------|
| 3404. nanellum, <i>Ohl.</i> ... 6601 | 3405. cerinarium, <i>Mudd.</i> 6602 |
|--------------------------------------|-------------------------------------|

†† *Sporidia triseptata.*

- | | |
|--|---------------------------------------|
| 3406. erraticum, <i>Mass.</i> ... 6603 | <i>v. ecatonospora, Ausf.</i> |
| 3407. pygmæum, <i>Korb.</i> 6604 | 3408. leucomelarium, <i>Md.</i> 6605 |
| <i>v. ventosicola, Mudd.</i> | 3409. rimosicolum, <i>Leight</i> 6606 |
| <i>v. grandiuscula, Arn.</i> | 3410. decolorans, <i>Rehm.</i> 6607 |
| <i>v. microcarpa, Anzi.</i> | 3411. peregrinum, <i>Flot.</i> 6608 |

- * * SOROTHELIA. *Perithecia aggregata, sporidia didyma.*
 3412. *confluens*, Korb. ... 6609

GEN. 3. **AMPHISPHERIA.** Sporidia fusca, fuliginæa, vel intense olivacea.

* AMPHISPHERELLA. *Sporidia continua, fusca.*

- | | |
|--|---|
| 3413. <i>amphisphæroides</i> ,
<i>S. & S.</i> ... 955 | 3419. <i>deerata</i> , C. & E.... 961 |
| 3414. <i>protuberans</i> , Karst. 956 | 3420. <i>Gandefroyi</i> , Fab.... 964 |
| 3415. <i>arasiaca</i> , Fab. ... 957 | 3421. <i>obtusissima</i> , B. &
C. ... 966 |
| 3416. <i>mycophila</i> , Fr. ... 958 | 3422. <i>Despreauxii</i> , M. ... 967 |
| 3417. <i>prinicola</i> , B. & C.... 959 | 3423. <i>diderma</i> , Schwz. ... 4331 |
| 3418. <i>canicollis</i> , K. ... 960 | 3424. <i>aperta</i> , Schwz. ... 4333 |

* * GENUINA. *Sporidia uniseptata fusca.*

- | | |
|--|---|
| 3425. <i>applanata</i> , Fr. ... 2714 | 3440. <i>emiliana</i> , Fab. ... 2738 |
| 3426. <i>sardoa</i> , Not. ... 2715 | 3441. <i>pusiola</i> , Karst. ... 2741 |
| 3427. <i>conica</i> , Lev. ... 2716 | 3442. <i>papillata</i> , Schum... 2743 |
| 3428. <i>fallax</i> , Not. ... 2718 | 3443. <i>phileura</i> , C. & P.... 2744 |
| 3429. <i>umbrina</i> , Fr. ... 2720 | 3444. <i>pinicola</i> , Rehm. ... 2749 |
| 3430. <i>pseudoumbrina</i> , S. 2721 | 3445. <i>biocellata</i> , Pass. ... 7473 |
| 3431. <i>Spegazziniana</i> , S. 2722 | 3446. <i>thujna</i> , Peck. ... 2760 |
| 3432. <i>bisphærica</i> , C. & E. 2724 | 3447. <i>closteriphora</i> , B. & Br.,
Grev. xvi. ... 2760 |
| 3433. <i>striata</i> , Nsl. ... 2726 | 3448. <i>papilla</i> , Schw. ... 2269 |
| 3434. <i>inæqualis</i> , Fab. ... 2728 | 3449. <i>albomaculans</i> , Schw. 4344 |
| 3435. <i>olearum</i> , Not. ... 2729 | 3450. <i>aquatica</i> , Ell. & Ev. 6617 |
| 3436. <i>æthiops</i> , B. & R... 2731 | 3451. <i>culmicola</i> , Sacc. ... 2757 |
| 3437. <i>quercetis</i> , Cke. &
Mass., Grev. xvi. 92. | 3452. <i>posidoniae</i> , Dk. &
M. ... 2760 |
| 3438. <i>Beccariana</i> , Ces. ... 2733 | 3453. <i>ventosaria</i> , Linds. 2761 |
| 3439. <i>majuscula</i> , Sp. ... 2736 | |

* * MELANOMMA. *Sporidia 2-3 septata fusca.*

- | | |
|--|--|
| 3454. <i>Jenynsii</i> , B. & Br. 3232 | 3460. { <i>nuclearia</i> , Not... 3308 |
| 3455. <i>obliterans</i> , B. & Br. 3233 | 3461. { <i>caryophaga</i> , Schw 4332 |
| 3456. <i>sylvanum</i> , Sacc. ... 3240 | 3462. { <i>nucitena</i> , B. & C. 3239 |
| 3457. <i>Eckfieldii</i> , Ellis ... 3247 | 3463. <i>taphrinoides</i> , Sacc.
& Sch. ... 7006 |
| 3458. <i>orni</i> , Not. ... 3228 | |
| 3459. <i>dubiosum</i> , Sacc. ... 3252 | |

* * Sporidia 4-pluriseptata.

- | | |
|---|---|
| 3464. <i>brachythele</i> , B. &
Br. ... 3269 | 3466. <i>inspersa</i> , Schwz. ... 2951 |
| 3465. <i>imitans</i> , Karst. ... 3273 | 3467. <i>populinum</i> , Schulz. 7008 |

*** TREMATOSPHERIA. *Perithecia majuscula.**Sporidia oblonga v. fusoides, 3-pluriseptata.*

- | | | | |
|------------------------------|------|--------------------------------|------|
| 3468. pertusa, Pers. ... | 3285 | 3484. errabunda, Fab. ... | 3301 |
| 3469. anglica, S. ... | 3286 | 3485. megalospora, Not. ... | 3302 |
| 3470. pertusella, S. ... | 3287 | 3486. Britzelmayriana, | |
| 3471. callispora, Not. ... | 3288 | Rehm. ... | 3303 |
| 3472. callicarpa, S. ... | 3289 | 3487. seminuda, Pers. ... | 3304 |
| 3473. callispermia, Sp. ... | 3290 | 3488. applanata, Oud. ... | 3305 |
| 3474. hydrela, Rehm. ... | 3291 | 3489. Fritzii, Schrot. ... | 3306 |
| 3475. peniophora, Cke. ... | 3292 | 3490. pyrenogena, DR. & | |
| 3476. porphyrostoma, | | M. ... | 3307 |
| Kze. ... | 3293 | 3491. buellioides, Rehm. ... | 7011 |
| 3477. melina, B. & Br. ... | 3294 | 3492. araneosa, Q. ... | 3310 |
| 3478. olearum, Cast. ... | 3295 | 3493. vindelicorum, | |
| 3479. lichenopsis, Mass. ... | 3296 | Rehm. ... | 3311 |
| 3480. decipiens, Not. ... | 3297 | 3494. lunariae, Curr., Grev. | |
| 3481. vesuvius, B. & Br. ... | 3298 | xvi. 92. ... | |
| 3482. pleurostoma, Rehm. ... | 3299 | 3495. tornata, B. & C. ... | 4335 |
| 3483. hydrophila, Karst. ... | 3300 | 3496. agnocystis, B. & Br. ... | 2732 |

*** CARYOSPORA. *Sporidia grandia, biconica conis locello minuto vel binis utrinque auctis.*

- | | | | |
|----------------------------|------|-----------------------------|------|
| 3497. putaninum, Schw. ... | 3312 | 3498. callicarpa, Curr. ... | 3313 |
|----------------------------|------|-----------------------------|------|

GEN. 4 **TEICHOSPORA.** *Fekl. Perithecia semi-immersa vel basi applanata. Sporidia muriformia.** *Peritheciis non collabentibus.*

- | | | | |
|-------------------------------|------|-------------------------------|------|
| 3499. taphrina, Fr. ... | 3876 | 3507. vitalbae, Not. ... | 3893 |
| 3500. disseminata, B. & | | 3508. seminuda, Not. ... | 3898 |
| C. ... | 3884 | 3509. Floresiana, Speg. ... | 3902 |
| 3501. interstitialis, C. & | | 3510. spectabilis, Fab. ... | 3905 |
| P. ... | 3885 | 3511. pirci, West. ... | 3906 |
| 3502. invereconda, Not. ... | 3886 | 3512. xerophila, Pech. ... | 3907 |
| 3503. oxystomoides, S. ... | 3887 | 3513. encalypti, C. & Hk. ... | 7105 |
| 3504. commutata, S. ... | 3888 | 3514. olenjensis, Karst. ... | 7107 |
| 3505. phragmitis, Pass. ... | 3890 | 3515. arthonioides, Pass. ... | 7502 |
| 3506. brevirostris, Fekl. ... | 3892 | | |

** STRICKERIA. *Peritheciis collapsis-concavis.*

- | | | | |
|-------------------------|------|--------------------------|------|
| 3516. peziza, Wint. ... | 3912 | 3518. obtusa, Fekl. ... | 3918 |
| 3517. Emilii, Fab. ... | 3915 | 3519. subocculta, K. ... | 3919 |

* * TEICHOSPORELLA. *Sporidia subhyalina.*

- | | | | |
|-------------------------------|------|---------------------------|------|
| 3520. dura, Fekl. ... | 3920 | 3522. obliqua, Karst. ... | 3922 |
| 3521. phellogena, B. & C. ... | 3921 | | |

GEN. 5. **WINTERIA.** *Rehm.* Perithecia mollinscula, viridi vel rufo parenchymatica (*Gibberella affinis*). Sporidiis septatis, cellulis divisis, luteolis vel hyalinis.

3523. lichenoides, *Rehm.* 3677 3526. crustosa, *Ell. & Ev.* 7113
 3524. viridis, *Rehm.* ... 3679 3527. rhoina, *Ell. & Ev.* 7114
 3525. ordinata, *Fr.* ... 3680 3528. cærulea, *Ell. & Ev.* 7115

The following corrections and additions can be made to Saccardo's "Sylloge," Vol. 2 :—

4137. *Sphæria lecythea*, *Schw.*, is a *Sphaeropsis* with sporules 30×10 -12, pale brownish, as in specimen from Schweinitz.

4321. *Sphæria panacis*, *Fr.*, according to specimen issued in Scler. Suec. No. 319. This is a *Diplodia*. Sporules 22 - $25 \times 8 \mu$.

4322. *Sphæria surenli*, *Fries* in Herb. Berkeley, is evidently only a *Phoma*.

4326. *Sphæria pericarpium*, *Schw.* in Herb. Berk., appears to be a minute *Phoma*.

4328. *Sphæria glandicola*, *Schw.* in Herb. Berk., is a *Phoma*. Sporules $5 \times 3 \mu$, basidia 20×3 .

4331. *Amphisphærella diderma*, *Schw.* in Herb. Berk. Sporidia $14 \times 8 \mu$, continuous, almond shaped.

4332. *Sphæria earyophaga*, *Schw.* Specimens from Schweinitz do not differ from *Sphæria nuclearia*, *Not.*, which again is the same as *Sph. nucitena*, *B. & C.*

4333. *Amphisphærella aperta*, *Schw.* in Herb. Berk. Sporidia $7 \times 5 \mu$ continuous, brown, oval.

4334. *Amphisphæria albo-maculans*, *Schw.* Sporidia fusiform, uniseptate, brown, $12 \times 3 \mu$.

4335. *Trematosphæria tornata*, *B. & C.* in Herb. Berk. Sporidia lanceolate, 3 septate, brown, constricted at the septa, straight or curved, $40 \times 6 \mu$.

Only authentic specimens have been consulted for the above notes.

3437. Conisphæria (Zignoella) quercetis, Cke. & Mass.

Peritheciis sparsis gregariisve, ligno semi-immersis, latera-liter compressis, hysterii-formibus, atris, ostioli papilla denum decedente, pertusis. Ascis clavato-cylindricis, sporidiis biseriatis, lanceolatis, quadrinucleatis, denum triseptatis, hyalinis, $35 \times 8 \mu$.

On naked bleached wood. S. Carolina. (*Dr. Curtis*, No. 1915.)

Allied to *C. hysterioides*, *Curr.*, but with larger and more immersed perithecia.

3497. **Trematosphæria agnocystis**, *B. & Br.*

Sporidiis lanceolatis, 3 septatis, fuscis, sæpe cellulis ultimis hyalinis, $40 \times 8 \mu$.

4348. **Conisphæria (Melanopsamma) nipæcola**, *Cke. & Mass.*

Peritheciis gregariis, magnis ($1-1\frac{1}{2}$ mm. diam.) atris, conoideis, papillatis, basi appplanatis. Ascis clavatis, stipitatis, sporidiis biseriatis, lanceolatis, medio uniseptatis, hyalinis, $35 \times 7 \mu$ (potius immaturis).

On cortex of *Nipa*. Java. (*Kurz.*, 270 in *Herb. Berk.*)

3359. **Amphisphæria quercetis**, *Cke. & Mass.*

Peritheciis gregariis, majusculis (1 mm. diam.) initio immersis, dein semi-emergentibus, conico-convexis, din epidermide tectis, papillatis, atris, basi appplanato, ascis cylindraccis, octosporis. Sporidiis uniseriatis, ellipticis, utrinque rotundatis, medio leniter constrictis, uniseptatis, brunneis, $28 \times 10 \mu$.

On bark of *Quercus albus*. N. Carolina. (*Dr. Curtis* in *Herb. Berk.*, No. 293.)

Sphæria (Trematosphæria) lunariæ, *Currey in Herb. Kew.*

Peritheciis sparsis, emergentibus, primum immersis, conicis, basi appplanatis, glabris, vertice papillatis. Ascis clavatis, octosporis, sporidiis sub-biserialibus, lanceolatis, 3 septatis, fuscis ($25-30 \times 8 \mu$).

On decorticated branches of *Fraxinus*. (Britain.)

3354. **Conisphæria (Zignoella) matthiolæ**, *Cooke.*

Peritheciis sparsis vel gregariis, erumpentibus dein subsuperficialibus, atris, pertusis, ascis clavatis, sporidiis fusiformibus, 5 septatis, hyalinis, $25 \times 4 \mu$.

On stems of *Matthiola incana*, near Marseilles. (*Rour.*)

3358. **Conisphæria (Lignoella) hysterioides**, *Currey.*

Peritheciis gregariis, semi-immersis, atris, lateraliter compressis, hinc hysterii-formibus, ostiolo pertuso, poriformi. Ascis clavatis, sporidiis fusiformibus, utrinque acutis $1-5$ septatis, hyalinis $30-35 \times 5 \mu$.

On rotten wood. Chislehurst.

3447. **Amphisphæria closteriphora**, *B. & Br.*

Peritheciis sparsis, majusculis ($1\frac{1}{2}$ mm. diam.), semi-immersis, conicis, vel basi appplanatis, atris, nitidis, ostiola papillato. Ascis clavatis, 8 sporis; sporidiis lanceolatis, uniseptatis, medio constrictis, fuscis $75 \times 10 \mu$.

On denuded branches. Java. (*Kurz.*)

3347. **Conisphæria (Melanopsamma) cubigena**, *Berk. = S. obtusissima*, *B. & C. Sacc. Syll. 4323.*

Sporidiis lanceolatis, uniseptatis, medio constrictis, nucleatis, hyalinis, $45-50 \times 6-8 \mu$.

LASCHLÆ NOVA SPECIES.

DESCRIPSIT ROB. FRIES.

In caldario horti publici Gothoburgensis—ubi non raro proveniunt notabiles Hymenomycetum formæ—ad *Bambusæ* truncum e Batavia reportatum fungum facie prorsus aliena recedentem observavit horti Director *G. Lowegren* et læte vigentem mecum benevole communicavit. Cujus h. l. liceat descriptionem et icones inserere.

Laschia testudinella.

Pileus membranaceus, gelatinoso-elasticus, ex orbiculari reniformis, leviter convexus, glaber, e griseo fuscescens, obscurius areolato-reticulatus; stipes lateralis, horizontalis, perbrevis; pori ampli, profundi, regulares, hexagoni, similes et concolores; sporæ copiosæ, oblongæ, albæ.

Habitus exacte *Hexagonæ* diminutæ, substantia vero gelatinosa, licet subrigidula. Sicca valde contrahitur, formam tamen servans; humectata denuo in pristinum modum intumescit. Pileus $\frac{1}{2}$ -1 unc. latus, juniorum orbicularis subgriseus, adultorum reniformis fuscescens, peculiari modo tessellatus, dissepimentis pororum membranam tennem pellucidam subruguloso-translucentibus l. potius obfuscantibus. Inde similitudo, quædam cum scuto dorsali testudinum apparet.

Pl. 172 B., Fig. I., exemplar junius; Fig. II., adultum refert, utrumque jam pridem pluries alternatim siccatum et aqua redvivum; ideo nonnihil diminuta, pavimento pilei minus manifesto; Fig. III., specimen juvenile siccum duplo auctum delineat.

Gothoburgi, 12, 11, 1887.

NEW BRITISH DISCOMYCETES.

BY WILLIAM PHILLIPS, F.L.S.

***Mollisia (Pseudopeziza) Alismatis*, Phil. & Trail, n.s.**

Cups seated on brown discoloured spots, gregarious, at first closed and covered, orbicular, then bursting through the epidermis and dehiscing with a lacerated thin margin, umber-brown when moist, black when dry; hymenium paler, plane; asci broadly clavate; sporidia 8, oblong, polari-guttulate, $10-14 \times 3-4 \mu$; paraphyses slenderly filiform.

On both sides of fading leaves of *Alisma Plantago*. Sept., Oct. Near Aberdeen. (*J. W. H. Trail*.)

Cups $100-300 \mu$ broad; asci $50-60 \times 10 \mu$.

***POCILLUM*, De Not. Disco, p. 7.**

Receptacle slender from the base, calyculate, disc applanate; excipulum fibrous, that is to say, interwoven of elongated cells;

asci numerous, elongated, 8-spored; paraphyses filiform; sporidia very long, filiform, hyaline, continuous.

Pocillum Boltonii, *Phil., n.s.*

Minute, scattered, at first cylindrical, then becoming nearly turbinate-truncate, glabrous, shining, horn-coloured, soft, watery, much contracted when dry; hymenium plane or a little depressed; asci broadly clavate; sporidia 8, elongated, sub-cylindrical, obtuse at the ends, $40-50 \times 3-4 \mu$; paraphyses filiform, thickened at the apices.

On dead *Equisetum*, lying in water. Near Birmingham. (Collected by the late T. Bolton, after whom it is named, and communicated by W. B. Grove.)

Cups 100-200 μ broad, 300-400 μ high. The sporidia, which are large for the size of the plant, are straight or a little bent, colourless, and furnished with several large vacuoles. They have a propensity to throw out long germ tubes while yet in the ascus. The excipulum is composed of elongated septate threads, but showing no colour as in the other species of the genus, *P. Cesatii* and *P. Americanum*.

Lachnella callimorpha (*Karst.*)

Cups gregarious, sessile or shortly stipitate, tomentose, somewhat plane, when dry spherical or hemispherico-contracted, hymenium yellow or orange-yellow; asci subclavate-cylindrical; sporidia 8, linear-fusiform, 6-8 guttæ, or spuriously pluriseptate, straight, $14-19 \times 2-4 \mu$, paraphyses acerose. *Lachnea callimorpha*, Karst. Symb., p. 250. *Lachnum callimorphum*, Karst. Myco. Fenn., p. 173.

On dead leaves of *Eriophorum angustifolium*. Near Aberdeen. Spring. (*Jas. W. II. Trail.*)

Cups 300-500 μ broad. Hairs short, not septate, colourless. Asci $40-50 \times 4 \mu$.

Ombrophila helotioides, *Phil., n.s.*

Stipitate, solitary or caespitose, capitulate, pallid, glabrous, subgelatinous; hymenium convex, margin thin, undulating; stem cylindrical, a little flexuous; asci cylindraceo-clavate; sporidia 8, narrowly fusiform, straight, or slightly bent, 5-guttulate, $20-26 \times 2-3, 5 \mu$, paraphyses filiform, hardly thickened at the apices.

On dead stems of *Equisetum* in water. Autumn. Park Loch, near Aberdeen, 1886. (*C. B. Plowright.*)

Cup 1-2 lines broad, the whole plant 2-4 lines high, stem $\frac{1}{4}$ line thick. It differs from *O. clarus* in the sporidia.

Dermatea amæna (*Tul.*)

Cups sometimes caespitose, sometimes circinate, arising from the upper surface of a stroma which is occasionally black; at first they are somewhat urceolate, then expanded and at length obconico-truncate; disc orbicular, plane or convex, immarginate (not more than $\frac{1}{2}$ a line broad); when full grown they are fleshy, and very

smooth above, shining, of a beautiful golden yellow; asci long, clavate, with a thin membrane; sporidia 8, biseriate, oblong-ovate, continuous, pellucid, slightly incurved, or not equilateral, $16-19 \times 6, 5 \mu$, filled with granular plasma. *Dermateu amœna*, Tul. in Schlecht. Ephem. Bot. Berol. v. xi., p. 54. *Pezicula amœna* Tul. Carp. p. 184, t. xxi., Fig. 1-9.

On dead oak branches. Autumn. Edgbaston Park. (*W. B. Grove.*)

Cups not exceeding $\frac{1}{2}$ a line, bursting forth in masses from the dry bark in autumn and winter. Spermatia naked, *i.e.*, not inclosed in spermogonia, evanescent; they are straight or curved and continuous, $3\frac{1}{2}-4$ rarely 6μ long.

Stylospores or conidia are produced in little unequal locula within the stroma escaping through narrow chinks. They are narrowly oblong, sometimes claviform, continuous, $192-225 \mu$ long, $4-5$ or sometimes $6-5 \mu$ broad.

There are four other species described as growing on different species of *Quercus*: *D. quercina*, Fekl., and *D. dryina*, Cke., on the common oak; *D. stegioïdes*, Speg., on *Quercus sessiliflora*, and *D. tubacina* on *Q. alba*.

PHILLIPS'S BRITISH DISCOMYCETES.

We are very pleased to announce the appearance of the long-promised volume of "British Discomycetes," by W. Phillips, although pressure of matter compels us to defer any further notice of it in the present number. This is less to be regretted, as we have already expressed a decided opinion elsewhere (*Nature*, Feb. 11th). The volume is everything which the student could wish, and the cheapest manual of fungi we have had. We can only recommend our readers to obtain it at once from Messrs. Kegan Paul & Co., and we can promise them it will be the best five shillings worth of mycology they ever purchased, with the extra merit of being *good* as well as *cheap*.

BRITISH HYPHOMYCETES.

(Continued from p. 65.)

Ramularia lampsanæ, Desm. Sacc. Syll. 1008.

On *L. communis*. Forden.

Ramularia pruinosa, Speg. Sacc. Syll. 1022.

On *Senecio Jacobina*. Forbes, N.B.

Ramularia senecionis, B. & Br. Sacc. Syll. 1023.

On *Senecio vulgaris*.

Ramularia variabilis, Fekl. Sacc. Syll. 1030.

On *Verbascum*.

- Ramularia calcea**, *Desm.* *Sacc. Syll.* 1032.
On *Glechoma* leaves. Epping.
- Ramularia cryptostegiæ**, *Pim.* *Sacc. Syll.* 1048.
On seeds of *Cryptostegia*. Dublin.
- Ramularia pratensis**, *Sacc. Syll.* 1049.
On *Rumex acetosa*. N. Wootton.
- Paraspora triseptata**, *Grove.* *Sacc. Syll.* 1084.
On rotten wood. Sutton.
- Milowia nivea**, *Massee.* *Sacc. Syll.* 1086.
On *Blismus compressus*.
- Septocylindrium Bonordeni**, *Sacc. Syll.* 1087.
On leaves of snowdrop; on wood.
- Septocylindrium elongatisporum**, *B. & Br.* *Sacc. Syll.* 1091.
On nettle stems. Batheaston.
- Septocylindrium pallidum**, *Grove.* *Sacc. Syll.* 1095.
On wood. Blackwell. Warwickshire.
- Septocylindrium chætospora**, *Grove.* *Sacc. Syll.* 1096.
On rotten wood. Streetlaw. Warwickshire.
- Septocylindrium concentricum**, *B. & Br.* *Sacc. Syll.* 1097.
On pine and larch chips.
- Prismaria furcata**, *Grove.* *Sacc. Syll.* 1110.
On rotten wood. Sutton. Warwickshire.
- Helicomycetes roseus**, *Link.* *Sacc. Syll.* 1115.
On wood, &c. Batheaston.
- Helicomycetes tubulosus**, *Riess.* *Sacc. Syll.* 1120.
On rotten wood. Hereford.

ORD. 2. DEMATIEÆ.

- Coniosporium olivaceum**, *Link.* *Sacc. Syll.* 1131.
On wood. Appin.
- Coniosporium arundinis**, *Corda.* *Sacc. Syll.* 1150.
On reeds. Irstead (Norf.).
- Coniosporium carbonaceum**, *Carm.* *Grer.* xvi., 79.
On *Spiræa*. Appin.
- Coniosporium physciæ**, *Kalch.* *Sacc. Syll.* 1170.
On apothecia of *Physcia parietina*. King's Lynn.
- Torula ovalispora**, *Berk.* *Sacc. Syll.* 30.
On branches. Sanquhar, N.B., Dargle (I.), Forden.
- Torula antennata**, *Pers.* *Sacc. Syll.* 1189.
On rotten wood. Twycross.
- Torula ulmicola**, *Rabh.* *Sacc. Syll.* 1201.
On branches of elm. Forres, N.B.
- Torula pulvillus**, *B. & Br.* *Sacc. Syll.* 1206.
On oak branches. Apethorpe.
- Torula monilioides**, *Corda.* *Sacc. Syll.* 1217.
On rotten wood. Appin.
- Torula cylindrica**, *Berk.* *Sacc. Syll.* 1220.
On branches. Appin.

- Torula pulveracea**, *Corda. Sacc. Syll.* 1221.
On fallen branches. Scotland, Seapoint (I.), Forden, Darent, Epping, Appin, Holm Lacey.
- Torula herbarum**, *Link. Sacc. Syll.* 1230.
On herb stems. Scotland, Dinmore, Dounton, Stoke Edith, Dublin, Forden, Dartford, Hampstead, Gopsall, Weybridge, Apethorpe, Highgate.
- Torula gyrosa**, *C. & M. Grev. xvi., p. 10.*
On pine wood. Kew.
- Torula expansa**, *Pers. Sacc. Syll.* 1231.
On herbs. Appin.
- Torula nucleata**, *Cooke. Grev. xvi., 79.*
On herb stems. Weybridge (F. Currey).
- Torula abbreviata**, *Corda. Sacc. Syll.* 1233.
On herb stems and on wood. Twycross.
var. *sphæriæformis*, *B. & Br.*
On branches of *Pinus*. Wroxall, Norfolk.
- Torula basicola**, *B. & Br. Sacc. Syll.* 1237.
On pea stems.
- Torula graminis**, *Desm. Sacc. Syll.* 1246.
On grass, *Glycerium*, &c. Forden, Colleyweston, Somersetshire, Kew, Dinmore.
- Torula rhizophila**, *Corda. Sacc. Syll.* 1249.
On grass roots.
- Torula chartarum**, *Link. Sacc. Syll.* 1260.
On paper. Forden.
- Hormiscium splendens**, *Cooke. Sacc. Syll.* 1279.
On bark. Drumduan, N.B.
- Hormiscium hysterioides**, *Corda. Sacc. Syll.* 1282.
On rotten wood. Glamis, N.B., Norfolk, Forden, Chiselhurst, Twycross, Weybridge.
- Hormiscium stilbosporum**, *Corda. Sacc. Syll.* 1283.
On willow and poplar. Norfolk, Forden, Batheaston, Somersetshire, Gopsall.
- Hormiscium pithyophilum**, *Nees. Sacc. Syll.* 1286.
On branches and leaves of coniferae. Shrewsbury, Glasgow.
- Gyroceras plantaginis**, *Corda. Sacc. Syll.* 1295.
On *Plantago* leaves. Stibington (Hants).
- Echinobotryum atrum**, *Corda. Sacc. Syll.* 1297.
On black moulds. Monkstown (I.), Norfolk, Milton, King's Cliffe, Apethorpe.
- Stachybotrys alternans**, *Bon. Sacc. Syll.* 1301.
On millboard. Weybridge.
- Stachybotrys atra**, *Corda. Sacc. Syll.* 1303.
On paper. Stratford-on-Avon, King's Lynn, Batheaston, Scarborough.
- Stachybotrys lobulata**, *Berk. Sacc. Syll.* 1304.
On paper. King's Cliffe, Leigh Wood, Eastbourne.

Stachybotrys dichroa, *Grove. Sacc. Syll.* 1306.

On stems of *Carduus*. Little Sutton (Warw.).

Stachybotrys asperula, *Mass. in Grev. xvi.*, 26.

On paper from Ceylon. Kew.

Stachybotrys minima, *Cooke. Sacc. Syll.* 1333.

On paper. Notts, Kew, Scarboro', Holloway.

Periconia byssoides, *Pers. Sacc. Syll.* 1310.

On herb stems. Jedburgh, Forden.

Periconia nigrella, *Berk. Sacc. Syll.* 1328.

On grass. King's Cliffe, Tay, Moray, Forden, Batheaston.

Periconia alternata, *Berk. Sacc. Syll.* 1332.

On paper. Forden, King's Cliffe.

Periconia repens, *Cooke. Grev. xvi.*, 79.

On herb stems. Chiselhurst (Currey).

Cephalotrichum curtum, *Berk. Sacc. Syll.* 1336.

On *Carex* leaves. Colleyweston.

Camptoum curvatum, *Kunze. Sacc. Syll.* 1337.

On leaves of *Scirpus*. Jedburgh, Wilts, Rudloe, Gopsall, Downton.

Arthrimum sporophlæum, *Kunze. Sacc. Syll.* 1350.

On leaves of *Carices*. Spye Park, Haywood Forest.

Goniosporium puccinioides, *K. & S. Sacc. Syll.* 1354.

On leaves of *Carices*. Grantown, N.B., Somerset, Spye Park, Batheaston, Rudloe.

Virgaria nigra, *Nees. Sacc. Syll.* 1356.

On trunks. Scotland.

Virgaria umbrina, *Klotsch.*

On *Thelephora*, &c. Appin.

Acrospira mirabilis, *B. & Br. Sacc. Syll.* 1366.

On chestnuts. Bristol, Batheaston, Bath.

Zygodesmus fuscus, *Corda. Sacc. Syll.* 1370.

On wood. Scotland, Bentham Hill, Hassocks Gate, Colwyn Bay, Scarboro', Downton.

Zygodesmus terrestris, *Berk. Sacc. Syll.* 1372.

On naked ground. Crundall (Kent).

Trichosporium fuscum, *Link. Sacc. Syll.* 1400.

On rotting pine bark.

Trichosporium inosculans, *Berk. Sacc. Syll.* 1427.

On *Thelephora*. Appin, Scarboro'.

Oedemium atrum, *Link. Sacc. Syll.* 1448.

On lime branches. Apethorpe.

Monotospora sphærocephala, *B. & Br. Sacc. Syll.* 1459.

On trunks. Batheaston, Twycross, Somersetshire.

Monotospora megalospora, *B. & Br. Sacc. Syll.* 1460.

On yew bark. Twycross, King's Cliffe, Greenshop, N.B., Scarboro'.

var. **fusispora**, *B. & Br.*

On old trunks.

- Monotospora pumila**, *Massee*. *Sacc. Syll.* 1463.
On *Graphium flexuosum*. Scarboro'.
- Monotospora asperospora**, *Cke. & Mass.* *Grev.* XVI., 79.
On *Clematis* twigs. Shere.
- Monotospora elliptica**, *B. & Br.* *Sacc. Syll.* 1465.
On herb stems.
- Hadrotrichum arundinaceum**, *C. & M.* *Grev.* XVI., 2.
On *Arundo conspicua*. Kew.
- Acremoniella fusca**, *Kunze*. *Sacc. Syll.* 1475.
On larch wood. Edinboro'.
- Acremoniella pallida**, *C. & M.* *Grev.* XVI., 79.
On dead leaves. Eastbourne.
- Catenularia simplex**, *Grove*. *Sacc. Syll.* 1482.
On rotten wood. Streetley (Warw.).
- Haplographium delicatum**, *B. & Br.* *Sacc. Syll.* 1484.
On trunks. Bowood, Batheaston, Dublin, Forden.
- Haplographium olivaceum**, *C. & M.* *Grev.* XVI., 2.
On rotten wood. Isleworth.
- Haplographium chartarum** (*Cooke*). *Sacc. Syll.* 1487.
On wall paper. Holloway.
- Haplographium bicolor**, *Grove*. *Sacc. Syll.* 1490.
On rotten wood. Middleton (Warw.).
- Haplographium tenuissimum**, *Corda*. *Sacc. Syll.* 1491.
On beech wood.
- Haplographium saponis**, *B. & Br.* *Sacc. Syll.* 1499.
On soap.
- Dematium hispidulum**, *Pers.* (= *Sporodum conopleoides*). *Sacc. Syll.* 1500.
On grasses. Forres, N.B., King's Lynn, Batheaston, Dartford, Twycross, Kidbrooke, Glasgow.

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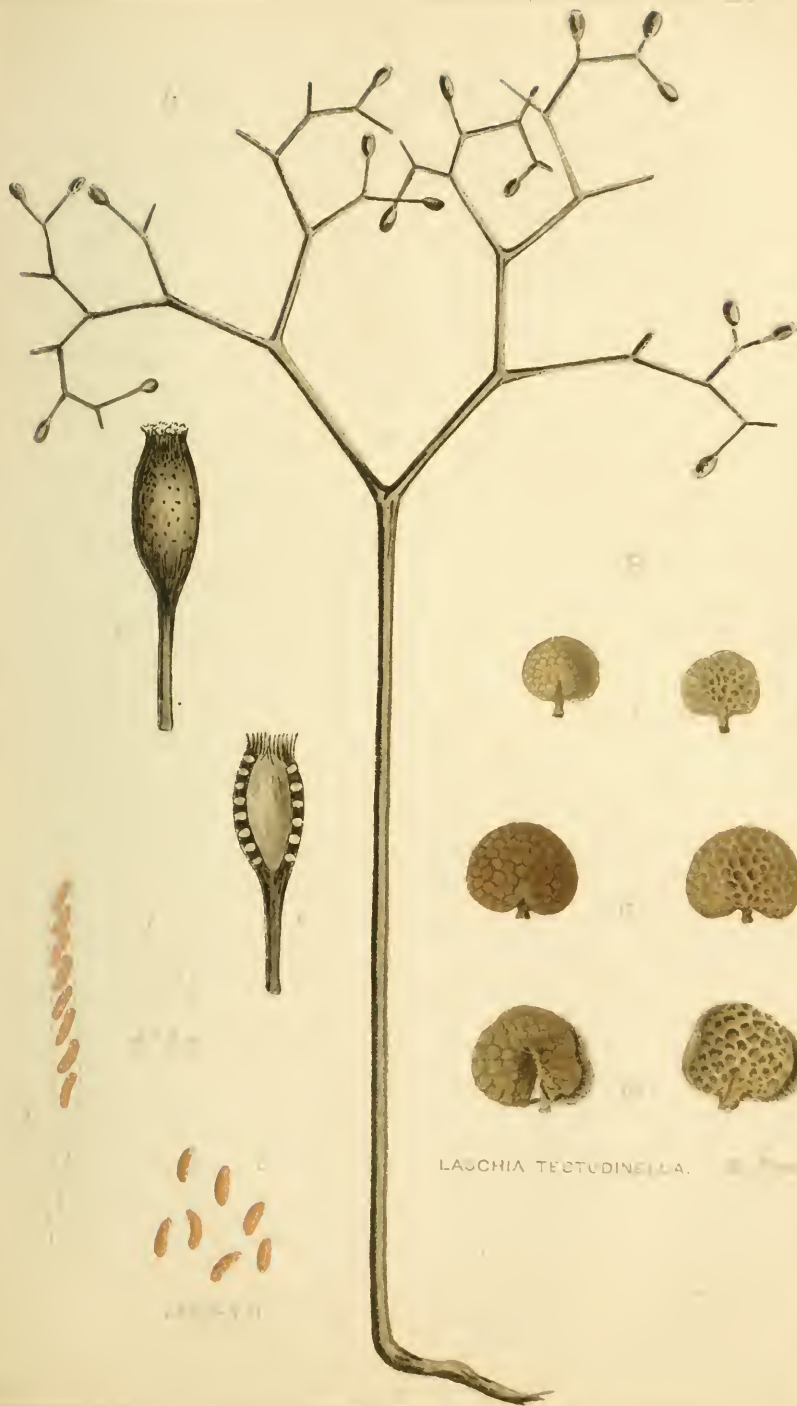
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LAUCHIA TESTUDINELLA.

Grevillea,

A QUARTERLY RECORD OF CRYPTOGAMIC BOTANY
AND ITS LITERATURE.

NEW BRITISH FUNGI.

By M. C. COOKE.

(Continued from p. 81.)

Agaricus (Lepiota) micropholis, Berk. & Br. Journ. Linn. Soc. XI., 505.

Pileus conical, then flattened, white ($\frac{1}{2}$ in. broad), clad with minute radiating dark cinereous squamules, margin substriate, stem flexuous, nearly equal, white, ring erect, spreading. Gills white, ventricose, crowded, free. Spores 5 μ long.—Cooke Illus. t. 943, f. B.

On cocoa nut fibre in a stove. Scarboro'.

Agaricus (Lepiota) felinus, Fr. Hym. Eur. 32.

Smaller than *A. clypeolarius*, pileus white, umbo and scales becoming black, stem attenuated upwards, of the same colour as the pileus. Gills crowded, white, margin serrate. Spores 10 \times 5 μ .—Cooke Illus. t. 943, f. A.

On the ground. Queen's Cottage, Kew.

Agaricus (Lepiota) martialis, Cke. & Mass.

Pileus thin, rather fleshy, silky pulverulent, campanulate then expanded, dark fleshy red, with a tinge of ochre, darkest in the centre, margin striate, scarcely an inch broad, stem slender, erect, fistulose, smooth 1-1 $\frac{1}{2}$ in. long, 1-2 lines thick, rufous and swollen at the base, ochraceous at the apex, with a broad pendulous rather distant ring. Gills free, somewhat lanceolate, rather crowded, whitish. Spores 8 \times 4 μ .—Cooke Illus. t. 944, f. B.

On tree fern in conservatory. Scarboro'. (G. M.)

Agaricus (Lepiota) ianthinus, Cooke.

Pileus rather fleshy, umbonate ($\frac{3}{4}$ inch broad), whitish at the even margin, disc dark violet, fibrillose, rest of pileus streaked with innate radiating, violet, hair like squamules, stem slender, somewhat flexuous, nearly equal, whitish, soon hollow, girt about the middle with a narrow deciduous ring. Gills free, lanceolate, scarcely crowded, whitish.—Cooke Illus. t. 944, f. A.

In stove. Kew Gardens.

Agaricus (Mycena) codoniceps, *Cooke*.

Minute, pileus campanulate, scarcely expanding, sulcate, sprinkled with somewhat erect short hairs, wholly unbar (about 1 line broad, 2 lines high), stem attenuated downwards, unbar below, whitish above, slender (nearly $\frac{1}{2}$ in. long), gills adnate, linear, not crowded, white. Spores $5\ \mu$ long.—*Cooke Illus. t. 952, f. B.*

On tree fern stems. Mr. Bull's nursery. 1874.

Illustrated from figures by Mr. W. G. Smith.

Bolbitius conocephalus, *Bull. Champ. t. 563, f. 1.*

Pileus membranaceous, conical, hygrophanous, disc even, slightly viscid, margin striate; stem fistulose, equal, smooth, shining, rather tough, white; gills free, ventricose, dingy, then ferruginous. (Spores $18 \times 9\text{--}10\ \mu$).—*Fr. Hym. Eur. p. 334.*

On the ground, in palm house. Kew.

Melanospora lagenaria (*Pers.*), *Sacc. Syll. 4596.*

On old *Polyporus adustus*. Queen's Cottage, Kew, April, 1888.

Melanospora cirrhata, *Berk. in Fungi Exs. No. 325.*

Spores $10 \times 7\frac{1}{2}\ \mu$.

On grass or *Carex*.

Has sometimes been referred to *M. Zaniae*.

Glæosporium encephalarti, *Cke. & Mass.*

Pustules scattered over the pinnæ, immersed, cuticle elevated and discoloured brown or black, with a pale perforate centre. Conidia elliptical, continuous, hyaline, $8 \times 5\ \mu$.

On leaves of *Encephalartos horridus*. Kew Gardens.

Phoma selaginellæ, *Cke. & Mass.*

Perithecia scattered, immersed, small, punctiform, black. Sporules elliptical, continuous, hyaline, $5 \times 3\ \mu$.

On stipes of *Selaginella Willdenorii*. Kew Gardens.

Stachybotrys verrucosa, *Cke. & Mass.*

Threads scattered, or collected in small dark olive tufts, erect, geniculate, with short branches at each angle, forming a lax spiral, septate, externally minutely rough, pallid, proceeding from a colourless, smooth, creeping branched mycelium; apices of the branches terminating in a whorl of four to six clavate basidia; conidia spherical, verrucose, black with a slight tinge of purple, $10\text{--}14\ \mu$.

On damp "drying paper." Herbarium, Kew.

Allied to *Stachybotrys scabra*, but a larger and finer species.

SACCARDO "SYLLOGE FUNGORUM."

The seventh volume (Part I.) has just made its appearance (March 15, 1888), and contains Gasteromycetæ, of which the Phalloideæ are by E. Fischer, and the residue by Dr. J. B. de Toni: Phycomycetæ by Dr. Berlese and J. B. de Toni, and the Myxomycetæ by Dr. A. N. Berlese.

To only one portion of this volume are we disposed to raise any objection, and that portion, we contend, is wholly unworthy of the

rest of the work, which has now reached its seventh volume. We have, it is true, raised conscientious objections to the basis of classification in the early volumes, but, although objecting to the system, have accorded our small meed of praise to Prof. Saccardo for the manner in which he has surmounted enormous difficulties, and collected together the material which has been scattered over the civilized world. It is no small merit in such a work that so little that is critical has been attempted. Thus far undoubtedly Prof. Saccardo has been wise, and his volumes will be all the more useful for it, seeing that it was impossible for him to obtain access to a vast bulk of the species, or to have examined and compared them within the reasonable compass of a lifetime. But, alas, such feelings and such prudence were not shared by all of his coadjutors, or at least by the author of the *Gasteromycetæ* (exclusive of the *Phalloideæ*). Undoubtedly it was a great mistake to set a novice to try his "prentice hand" at a section of this work without the caution, at the same time, that a critical revision would not be advisable. What has been the consequence may be presumed from the fact that one hundred and three pages of the original text required twenty-three pages of corrections and emendations before the printing of the volume was completed. Unfortunately, we have neither the time nor the space at our disposal to pass in review so much of the 103 pages as are not corrected in the 23 pages of emendations. Suffice it to say that these corrections chiefly apply to two large genera. What would have been the amount of correction necessary had some revision of one or two other large genera been brought to the author's notice, it is impossible to guess. Suffice it to say that if the author in question had really and practically known *Scleroderma* (perhaps no species has been found in Italy of late years) he could never look on *Scleroderma* again without blushing. We are not, by any means, raising a fictitious issue, as anyone with a moderate knowledge of *Gasteromycetes* will confess on turning to this volume. Let him refer to page 95, a new genus, *Lanopila*, is elaborated for species with a *single* peridium, but three species out of the four are described with a *double* one. *Borista* is distinguished from *Lycoperdon* by not having a *sterile* base, which would offer no ground of complaint if it were adhered to, yet on the contrary some species included in *Borista* have a sterile base and some of those assigned to *Lycoperdon* possess no trace of a sterile base. In *Lycoperdon* there are two sections, one with smooth spores, and the other with echinulate spores, yet, forsooth, *Lycoperdon echinatum* (p. 107), which has echinulate spores (according to his own admission), is placed in the section having smooth spores, and more than all, ye immortal gods, it is accommodated as a variety of *L. gemmatum*. If such eccentricities as these are not internal evidence of "slop work" or "prentice work" then our experience has been gathered in vain. Take another case (p. 49), *Diplodermæ* is a sub-family, but the genus *Diploderma*, the type of the sub-family (p. 92), is held in doubt and

is suspected of belonging to another sub-family. Rather a strange family when its head is believed to belong to another family. As for *Scleroderma* itself, as here interpreted, it is merely a sort of omnium gatherum, a receptacle for all species with a thick, hard coat, without any regard either to internal structure, capillitium, spores, or even the verrucose cortex, which, by-the-bye, is one of the salient features of the genus. Had the names of all the species of *Trichogasters* been put into a hat and shaken up, then picked out haphazard, and made into piles to represent genera, such a process would have accomplished a result almost as satisfactory as the one we have felt compelled to deride. It is no pleasure to us, or anyone, to condemn, but rather to praise, but public duty must control private feeling. All we can say is, that we wish this portion of the volume before us had never been written, to impose upon us such an unthankful duty. In the future it would be extremely prudent for the learned Doctor to confine his *critical* revisions to the Algæ, which surely is a group large enough to satisfy the ambition and capacity of any single individual.

"THE FLORA OF WEST YORKSHIRE."*

This volume, which forms the second volume of the "Botanical Series of the Transactions of the Yorkshire Naturalists' Union," is neatly and well "got up." The paper is good, and the type leaves nothing to be desired. The portion devoted to the Phanerogamia has been modelled upon Mr. Baker's "North Yorkshire," and, we are credibly informed, is well done, although outside our special province. The Cryptogamia occupy the latter 340 pages, or nearly half the work, and this has been compiled by the aid of various individuals, whose services are duly acknowledged. It is difficult to give an opinion upon a catalogue of Cryptogams without having had an opportunity of testing it. There are but two ways of making a catalogue of such a kind of any value. First, the preservation of a herbarium of the species included, which shall be available for reference at some public institution. Secondly, in default of this, the responsibility of some well known and thoroughly competent authority. We fail to recognize either of these safeguards against error in the work before us, and yet critical species amongst the Cryptogamia are not things which any novice can determine. In the present instance the local collaborateur may, for aught we know, be quite competent, but it has a suspicious appearance when the list of Fungi is arranged and based upon a work now wholly out of date, whilst a little trouble and a little more intelligent appreciation of his work were only required to have adopted a method more in accord with the progress of science. That he has not done so is tantamount to an

* "The Flora of West Yorkshire," by Frederic Arnold Lees, M.R.C.S., 1 Vol., cloth, pp. 845. London: Lovell, Reeve, and Co., 1888.

acknowledgment that he is totally unacquainted with the literature of the subject during the past ten years. Like Rip van Winkle, he has been sleeping till his rifle is rusty and his dog is dead. As to the Fresh-water Algæ, which we are told might have been classified "more in accordance with the requirements of the higher examinations of the various Universities," we can only add that the recorder has certainly not done his duty if he has withheld this higher classification, which it was in his power to give. Either he knows of a better classification, or could elaborate one himself, and not doing so has not done his best for the work; or else he does *not* know of a better system, and only proffered the innuendo because he had nothing else to say, or perhaps as an excuse for his original mind condescending to follow anybody's beaten track. Whichever he pleases, and we are content. "In the nation of the blind the one-eyed man is king."

EXOTIC AGARICS.

By M. C. COOKE.

Agaricus (Lepiota) atricapillus, *Cke. & Mass.*

Pileo obtuse convexo, subhæmispherico, apice truncato, depresso, atro, ceteris cervino, squamis minutis obscurioribus ornato ($\frac{1}{2}$ in. diam.). Stipite elongato (4-5 unc. long, 2 lin. crass) æquali, erecto, deorsum squamuloso, annulo patente furfuraceo. Lamellis liberis, sublanceolatis. Spor. $5 \times 3 \mu$.

On the ground. Natal (*Wood* 828).

Agaricus (Lepiota) malleus, *Berk. Intell. Obs. No. 67.*

Pileo subgloboso, demum convexo-applanato, obtuse umbonato, extus intusque albo (3 unc. diam.), cute tenui in squamulas irregulares angulatas cinereas diffracto, stipite elongato, deorsum incrassato, bulboso (5-6 unc. long) fistuloso, cinereo, carne fusco-rubro, annulo amplo, patulo, lamellis liberis, lanceolatis, albidis; sporis ellipticis ($15-17 \times 10 \mu$), episporio crasso.

Ad terram. Masulipatam, India.

Agaricus (Lepiota) alliciens, *Berk. in Herb. No. 76.*

Cæspitosus. Pileo conico-campanulato, sulfureo (circa 1 unc. diam.), adpresse fusco-squamuloso, squamulis, acutis margine striato, crenulato. Stipite gracili, flexuoso, ascendente, elongato (4-5 unc. long, 2 lin. crass) fistuloso, æquali vel deorsum leniter incrassato, annulo deciduo, lamellis liberis, lanceolatis, virescentibus. Spor. ovatis ($12 \times 8 m.$) subviridis.

Ad frustulis. Masulipatam, India.

Agaricus (Lepiota) conipes, *Berk. in Herb. No. 67.*

Totus sulfureus, solitarius. pileo hemispherico dein explanato, obtuse umbonato, membranaceo, usque ad medium et ultra plicato, fusco-furfuraceo, lamellis confertis, quodquam undulatis, lineari-lanceolatis, irregulari-iridymis, pileo rotundato-adnatis; stipite

inæquali, subtereti, sulfureo-furfuraceo, superne tenuissime attenuato, anguste fistuloso, basin immoderate incrassato, solido et caseoso-carnoso, annulato, mycelio radiceiformi e fibrillis numerosis ramosissimis albescensistente. Sporis ovatis, hyalinis, $8 \times 4 \mu$.

Ad terram argillosam. Java (*Kurtz*, No. 528).

Pileus one inch diam. Stem 1 in. long.

Agaricus (*Lepiota*) *microspilus*, *Berk. in Herb.* 141.

Pileo convexo, umbonato ($1-1\frac{1}{2}$ unc. lat.) carneo, disco rufescente, ubique pilis erectis sparsis rulis obsesso, margine lævi, stipite æquali, fistuloso, concolori ($1\frac{1}{2}-2$ unc. long, 2 lin. crass) deorsum rufo-strigoso. Annulo superiori, fugaci. Lamellis liberis, ventricos, albidis. Sporis ellipticis, hyalinis, $8-10 \times 5 \mu$.

On the ground. Ceylon (No. 1227 cum icone).

Agaricus (*Pleurotus*) *russaticeps*, *Berk.*

Pileo carnos, convexo, applanato, demum depresso (2 unc. diam.), glabro, lævi, rufo-brunneo, margine tenui. Stipite subexcentrico, rigido, adscendente (1 unc. long, 3-4 lin. crass) pallido, ad basim disciformi, lamellis confertis, arcuato-adnatis, angustis, albis. Sporis $10 \times 4-5$.

Ad truncos. Edible. Japan, 1873.

Allied to *Ag. corripellis*, Fr.

Agaricus (*Pleurotus*) *subocreatus*, *Cooke in Off. Cat. Inter. Exhib.* 1862, p. 73.

Pileo carnos, convexo, fuligineo, glabro, lævi (2-3 unc. diam.), margine tenui, patulo, demum fissurato, stipite brevi, ascendente (1 unc. long, $\frac{1}{4}-\frac{1}{2}$ unc. crass), curvato, rugoso, pallidiori, faret, ad basim velo subocreato. Lamellis confertis, latis, adnatis. ? Sporis ellipticis ($6 \times 4 \mu$).

On stumps. Singapore, 1862.

Edible. Sent from Singapore to the London Universal Exhibition of 1862.

BRITISH HYPHOMYCETES.

(Continued from p. 99.)

Cladotrichum fuscum, *Grer. Sacc. Syll.* 1800.

On capsules of Gentian.

Diplococcium spicatum, *Grove. Sacc. Syll.* 1802.

On rotten wood. Sutton Coldfield.

Clasterosporium hormiscioides, *Corda. Sacc. Syll.* 1815.

On oak and wood. Sutton Coldfield.

Clasterosporium vermiculatum, *Cooke. Sacc. Syll.* 1817.

On oak wood. Hereford.

Clasterosporium fasciculare, *Ca. Sacc. Syll.* 1834.

On bark. Twycross.

- Clasterosporium opacum**, *Corda*. *Sacc. Syll.* 1836.
On elm trunks. St. Catherines.
- Clasterosporium fungorum**, *Fr.* *Sacc. Syll.* 1846.
On Corticium. King's Cliffe, Glasgow.
- Clasterosporium abruptum**, *B. & Br.* *Sacc. Syll.* 1849.
On rotten wood.
- Clasterosporium clavæforme**, var. **leptopus**. *Sacc. Syll.* 1985.
On naked wood. Weybridge.
- Clasterosporium parasiticum**, *Cooke*. *Sacc. Syll.* 1863.
Parasitic on *Phleospora mori*.
- Clasterosporium caulicolum** (*Corda*). *Sacc. Syll.* 1868.
On stems. Britain.
- Fusariella atrovirens**, *Berk.* *Sacc. Syll.* 1876.
On *Allium*. King's Cliffe.
- Septonema spilomeum**, *Berk.* *Sacc. Syll.* 1895.
On old chips. Guernsey.
- Septonema irregulare**, *B. & Br.* *Sacc. Syll.* 1896.
On apple branches. Apethorpe, Dublin.
- Helminthosporium velutinum**, *Link.* *Sacc. Syll.* 1914.
On rotten wood. Scotland, Dublin, Apethorpe, Hassocks Gate, Swanscombe, Appin.
- Helminthosporium cylindricum**, *Corda*. *Sacc. Syll.* 1917.
On rotten beech. Twycross.
- Helminthosporium simplex**, *Nees*. *Sacc. Syll.* 1921.
On willow wood, Monkstown (I.), Appin.
- Helminthosporium capitulatum**, *Corda*. *Sacc. Syll.* 1925.
On wood. Twycross.
- Helminthosporium molle**, *B. & C.* *Sacc. Syll.* 1942.
On holly branches. Powerscourt.
- Helminthosporium minimum**, *Cke.* *Grav.* xvi., 80.
On decorticated branches. Hereford.
- Helminthosporium tiliæ**, *Fr.* *Sacc. Syll.* 1950.
On lime. Scotland, Shere, Norfolk, Twycross.
- Helminthosporium Rousselianum**, *M.* *Sacc. Syll.* 1957.
On wood of elm. Edinburgh.
- Helminthosporium subulatum**, *Nees*. *Sacc. Syll.* 1958.
On oak branches. Appin, N.B., Midlands (Partron).
- Helminthosporium nanum**, *Nees*. *Sacc. Syll.* 1962.
On wood. Appin, Kidbrooke.
- Helminthosporium macrocarpum**, *Grav.* *Sacc. Syll.* 1973.
On branches. Scotland and England generally. Common.
- Helminthosporium fusiforme**, *Corda*. *Sacc. Syll.* 1974.
On branches of hazel, &c. Moneriffe, N.B., Forden, Kew, Twycross, Batheaston, Epping.
- Helminthosporium apiculatum**, *Corda*. *Sacc. Syll.* 1975.
On birch wood, &c. Scotland, Twycross, Highgate, Orton Wood, Dimmore.

Helminthosporium parvum, Grove. Sacc. Syll. 3626.

On oak wood. Sutton Coldfield.

On *Clematis* stems. Darent.

Helminthosporium scolecoides, Corda. Sacc. Syll. 1978.

On wood and stems. Twycross.

Helminthosporium folliculatum, Corda. Sacc. Syll. 1979.

On cabbage stems, &c. Greeshop, N.B., Forden, King's Cliffe, Scarboro', King's Lynn, Darent, Wellington, Gopsall.

Helminthosporium gongotrichum, Corda. Sacc. Syll. 1981.

On ash wood. Forden, Orton Wood.

Helminthosporium dendroideum, B. & Br. Sacc. Syll. 1983.

On *Acer*. Batheaston.

Helminthosporium densum, Sacc. Syll. 1985.

On *Morus alba*. Kew.

Helminthosporium Smithii, Berk. Sacc. Syll. 1991.

On holly twigs. Forres, N.B., Forden, Chislehurst, Dinmore, Hampton Court, Shere, Neatishead, Lyndhurst, Somersetshire.

Helminthosporium fusisporum, Berk. Sacc. Syll. 2000.

On branches. Beeston (Notts), Forden, Twycross.

Helminthosporium macilentum, Cooke. Sacc. Syll. 2002.

On rotten wood. Shrewsbury, Hereford.

Helminthosporium turbinatum, B. & Br. Sacc. Syll. 2005.

On wood. Lancashire.

Helminthosporium velatum, Corda. Sacc. Syll. 2006.

On wood. Twycross.

Helminthosporium rhabdiferum, B. & Br. Sacc. Syll. 2010.

On peaches. Bodelwyddan.

Helminthosporium rhopaloides, Fres. Sacc. Syll. 2013.

On cabbage stems, &c. Forden.

Helminthosporium resinacearum, Cke. Græv. xvi.

On pine resin. Shere.

Helminthosporium reticulatum, Cke. F. Britt. I. 360.

On ash leaves. Thrisk.

Brachysporium stemphylioides, Corda. Sacc. Syll. 2036.

On old wood. Edinboro', Wellington, Altingham, Scarboro', Dinmore.

Brachysporium salisburiae, Rabh. Sacc. Syll. 2037.

On leaves of *Salisburia*. Kew.

Brachysporium oosporum, Corda. Sacc. Syll. 2040.

On trunks. East Bergholt.

Brachysporium altum, Pr. Sacc. Syll. 2044.

On walnut wood. Twycross.

Brachysporium hyalospermum, Corda. Sacc. Syll. 2047.

On wood. Twycross.

Brachysporium apicale, B. & Br. Sacc. Syll. 2048.

On branches. Glamis, N.B., Forden, Langley (Wilts), Swanscombe, Shrewsbury, Elmstead, Credinhill.

- Brachysporium Bloxami**, Cooke. *Sacc. Syll.* 2049.
On wood. Twycross.
- Brachysporium obovatum**, Berk. *Sacc. Syll.* 2052.
On rotten wood. Scarboro', Apethorpe, Orton Wood, Breinton.
- Brachysporium tingens**, Cooke. *Sacc. Syll.* 2053.
On rotten wood. Staunton.
- Cercospora Bloxami**, B. & Br. *Sacc. Syll.* 2082.
On cabbage leaves. Twycross.
- Cercospora resedæ**, Fekl. *Sacc. Syll.* 2092.
On leaves of *Reseda*. Jersey.
- Cercospora Calthæ**, Cke.
On *Caltha* leaves. Forres.
- Cercospora ferruginea**, Fekl. *Sacc. Syll.* 2138.
On leaves of *Artemisia vulgaris*.
- Cercospora mercurialis**, Pass. *Sacc. Syll.* 2193.
On *Mercurialis perennis*. Darent, Aberdeen, Hereford.
- Cercospora moricola**, Cooke. *Sacc. Syll.* 2281.
On *Morus rubra*. Clevedon.
- Heterosporium laricis**, C. & M. *Grev. XVI.*, 80.
On larch leaves. Norfolk.
- Heterosporium exasperatum**, Berk. *Sacc. Syll.* 1945.
On leaves of *Dianthus*. Monkstown, King's Cliffe, Largo.
- Heterosporium epimyces**, C. & Mass. *Grev. XVI.*, 80.
On *Polyporus* and *Boletus*. Highgate, Forest of Dean.
- Heterosporium ornithogali**, Klot. *Sacc. Syll.* 2306.
On *Ornithogalum*. Shrewsbury.
- Heterosporium variabile**, Cooke. *Sacc. Syll.* 2310.
On leaves of *Spinacia*. Forden.
- Heterosporium auriculæ** (Cooke). *Grev. XVI.*
On leaves of *Auricula*. Roy. Hort. Society.
- Heterosporium echinulatum** (Berk.). *Sacc. Syll.* 2311.
On leaves of *Convallaria*, *Scilla*, *Smilax*. Kew, Chislehurst.
- Heterosporium phragmitis**, Opiz. *Sacc. Syll.* 2309.
var. **typharum**.
On leaves of *Typha*. Kew.
- Heterosporium minutulum**, Cke. & Mass. *Grev. XVI.*, 11.
On leaves of *Chamaerops humilis*. Kew.
- Heterosporium typharum**, C. & M. *Grev. XVI.*, 80.
On *Typha angustifolia*. Kew.
- Napicladium arundinaceum**, Corda. *Sacc. Syll.* 2317.
On reeds. King's Lynn.
- Spondylocladium fumosum**, Mart. *Sacc. Syll.* 2319.
On branches.

Acrothecium delicatulum, *B. & Br. Sacc. Syll.* 2328.

On rotten wood, and on *Rubus*.

Acrothecium simplex, *B. & Br. Sacc. Syll.* 2330.

On nettle stems. Batheaston.

var. **elatum**, *Grove*.

On nettle stems. Harborne (Warw.).

Acrothecium xylogenum, *Grove. Sacc. Syll.* 3635.

On wood. Burnt Green (Warw.).

Sporochisma mirabile, *B. & Br. Sacc. Syll.* 2333.

On rotten wood. Edinbro', Dublin, Norfolk.

Dendryphium comosum, *Wallr. Sacc. Syll.* 2335.

On nettle stems. Forden, Charlton, Somersetshire, Darenth, Chislehurst.

Dendryphium fumosum, *Corda. Sacc. Syll.* 2337.

On herb stems. Weybridge.

Dendryphium griseum, *B. & Br. Sacc. Syll.* 2344.

On nettle stems. Batheaston, Highgate.

Dendryphium ramosum, *Cooke. Sacc. Syll.* 2347.

On herb stems. Ashmanhaugh (Norf.), Darenth.

Dendryphium curtum, *B. & Br. Sacc. Syll.* 2348.

On herb stems. Dundee, Dupplin, Forden, Batheaston, Shere, Highgate, Hereford, Tottenham.

Dendryphium laxum, *B. & Br. Sacc. Syll.* 2350.

On *Inula viscosa*. King's Cliffe, Forbes, N.B.

Sporidesmium melanopodum, *B. & Br. Sacc. Syll.* 2356.

On apple bark. Twycross.

Sporidesmium lobatum, *B. & Br. Sacc. Syll.* 2364.

On spruce wood. Lucknam (Wilts).

Sporidesmium scutellare, *B. & Br. Sacc. Syll.* 2366.

On larch bark.

Sporidesmium antiquum, *Corda. Sacc. Syll.* 2368.

On trunks. Twycross.

var. **compactum**.

On hard wood. Wraxall (Som.).

Sporidesmium polymorphum, *Corda. Sacc. Syll.* 2377.

On bark and wood. Wraxall.

Sporidesmium pyriforme, *Corda. Sacc. Syll.* 2384.

On rotten chips. Shropshire.

Sporidesmium cladosporii, *Corda. Sacc. Syll.* 2405.

On *Scrophularia*. Darenth.

Sporidesmium triglochinis, *B. & Br. Sacc. Syll.* 2407.

On stems of *Triglochin*. Rannoch, N.B.

Sporidesmium chartarum, *Sacc. Syll.* 2413.

On paper. Holloway.

- Coniothecium effusum**, *Corda. Sacc. Syll.* 2420.
On wood. Scotland, Dublin, Forden, King's Lynn, Dinmore, Shere, Epping.
- Coniothecium conglutinatum**, *Corda. Sacc. Syll.* 2421.
On birch wood. Shrewsbury.
- Coniothecium amentacearum**, *Corda. Sacc. Syll.* 2426.
On willow. King's Cliffe, Forden, Weybridge, Kew, Apethorpe, King's Lynn, Dinmore, Darenth, Tunbridge.
- Coniothecium betulinum**, *Corda. Sacc. Syll.* 2428.
On birch twigs. Wiltshire, Forden, King's Lynn.
- Coniothecium viticolum**, *Cke. & Mass. Grev. XVI., 9.*
On vine twigs. Kew.
- Dictyosporium elegans**, *Corda. Sacc. Syll.* 2451.
On rotten wood. Somerset, Bristol, Kidbrooke, Twycross, Brockley.
- Speira toruloides**, *Corda. Sacc. Syll.* 2454.
On leaves and stems. Sanquhar, N.B., Monkstown (I.), Bath-easton, Orton Wood.
- Tetraploa aristata**, *B. & Br. Sacc. Syll.* 2463.
On herbs and grasses. Norfolk, Kew, King's Cliffe, Monks-town (I.).
- Stemphylium macrosporoideum** (*B. & Br.*). *Sacc. Syll.* 2478.
On dead *Ribes*. King's Cliffe.
- Stemphylium alternariæ** (*Cooke*). *Sacc. Syll.* 2497.
On wall paper. Holloway, Forres, N.B.
- Stemphylium asperosporum**, *C. & M. Grev. XVI., 11.*
On wall paper. Holloway.
- Stemphylium fuscum**, *Currey.*
On cabbage stalks. Blackheath.
- Macrosporium commune**, *Rabh. Sacc. Syll.* 2499.
On herb stems, &c. Common.
- Macrosporium sarcinula**, *Berk. Sacc. Syll.* 2500.
On rotten *Cucurbitaceæ*. King's Cliffe, Forden, Fleetwood, Mundesley.
- Macrosporium cladosporioides**, *Desm. Sacc. Syll.* 2501.
On leaves, &c. Kensington, Dartford.
- Macrosporium heteronemum**, *Desm. Sacc. Syll.* 2502.
On leaves of *Sagittaria*. Irstead (Norf.), Bungay (Suf.).
- Macrosporium cheiranthi**, *Fries. Sacc. Syll.* 2505.
On wallflower, &c. Scotland, Dublin, Forden, Neatishead, Bungay, Mundesley.
- Macrosporium brassicæ**, *Berk. Sacc. Syll.* 2506.
On cabbage leaves and stems. King's Cliffe.
- Macrosporium ramulosum**, *Sacc. Syll.* 2512.
On *Umbellifers*. Dinmore.

- Macrosporium nobile**, *Vize*. *Sacc. Syll.* 2525.
On leaves and stems of *Dianthus*. Forden.
- Macrosporium concinnum**, *B. & Br.* *Sacc. Syll.* 2536.
On willow hamper. Glamis, N.B., Apethorpe, Orton Wood.
- Macrosporium delicatulum** (*Berk.*). *Sacc. Syll.* 1964.
On *Umbelliferae*. King's Cliffe, Greeshop, N.B.
- Macrosporium tomato**, *Cke.* *Sacc. Syll.* 2552.
On tomato fruits. Hereford.
- Macrosporium alliorum**, *C. & M.* *Grev.* XVI., 80.
On onion leaves. E. Bergholt.
- Macrosporium convallariæ**. *Sacc. Syll.* 2574.
On *Convallaria umbellata*. Kew.
- Macrosporium scolopendri**, *Cke.* *Grev.* XVI., 81.
On *Scolopendrium vulgare*. Irstead.
- Mystrosporium stemphylium**, *Corda.* *Sacc. Syll.* 2590.
On stems of dahlia and mallow. Ireland, Bury St. Edmunds.
- Mystrosporium alliorum**, *Berk.* *Sacc. Syll.* 2592.
On *Allium*. Exeter.
- Septosporium bulbotrichum**, *Corda.* *Sacc. Syll.* 2601.
On rotten wood.
- Septosporium atrum**, *Corda.* *Sacc. Syll.* 2609.
On *Smyrniun*. Batheaston, Lewes.
- Dactylosporium brevipes**, *Grove.* *Sacc. Syll.* 3641.
On maple wood. Sutton Coldfield.
- Fumago vagans**, *Pers.* *Sacc. Syll.* 2618.
On living leaves. Common.
- Ceratosporium digitatum**, *Cooke.* *Sacc. Syll.* 2625.
On holly branches. Norfolk.
- Triposporium elegans**, *Corda.* *Sacc. Syll.* 2631.
On rotten wood. Twycross, Glamis, N.B., Forden, Darent, Brockley Coombe, Bristol.
- Triposporium Ficinusium**, *Preuss.* *Sacc. Syll.* 2634.
On branches. Bexley. (F. Currey.)
- Helicosporium pulvinatum**, *Nees.* *Sacc. Syll.* 2638.
var. *effusum.* *Berk.*
On wood.
- Helicosporium Mulleri**, *Corda.* *Sacc. Syll.* 2639.
On wood. Dunphail, N.B., Norfolk, Forden.
- Helicosporium viride**, *Corda.* *Sacc. Syll.* 2640.
On wood of *Betula*. Kew, Shere.
- Helicosporium lumbricoides**. *Sacc. Syll.* 2642.
On rotten oak wood.
- Helicosporium vegetum**, *Nees.* *Sacc. Syll.* 2643.
On rotten wood. Rockingham Forest, King's Cliffe.

Helicosporium albidum, *Grove. Sacc. Syll.* 3644.

On bramble. Middleton (Warw.).

Helicosporium Rennyi. *Berk. in Herb.*

On wood? Hereford.

AUSTRALASIAN FUNGI.

BY M. C. COOKE.

The species to which an asterisk is prefixed were communicated by Baron F. von Mueller.

***Agaricus (Clitocybe) myriophyllus**, *Cke. & Mass.*

Pileo carnosio, infundibuliformi (1-1½ unc.), glabro, nitido, fusco, griseo, vel ochraceo-albo, margine tenui, incurvo. Stipite æquali, vel deorsum attenuato, solido, ad basin fuscescens (1 unc. long, 2 lin. crass). Lamellis longe decurrentibus, linearibus, angustis, confertis, ochraceo-albidis. Sporis 6 × 3 μ.

On ground amongst grass. Melbourne (*Tisdall* 32.)

Allied to *Ag. infundibuliformis*.

***Hygrophorus (Hygrocybe) subremotus**, *Cke. & Mass.*

Pileo convexo, applanato, demum centro depresso, flavido, disco rufescente, viscido (1 unc. diam.) margine striatulo; stipite elongato, fistuloso, æquali, albido, flavo-maculato (3 unc. long, ¼ unc. crass). Lamellis postice attenuatis, vix attingentibus, subdistantibus; albis. Sporis globosis, 7-8 μ diam.

On the ground amongst grass. Melbourne (*Tisdall* No. 34).

Polyporus (Lobati) Zealandicus, *Cke.*

Imbricato-multiplex, e carnosio-lento coriaceus. Pileolis dimidiatis, inciso-lobatis, subzonatis, longitudinaliter rugosis, fulvescentibus, velutinis, stipitibus connato-ramosis; poris albidis, inæqualibus, majusculis, demum confluentibus, dissepimentis tenuibus, acie dentatis. Hymenio ab hymeniophori facile dissiliente. Sporis globosis, spinulosis, 10 μ diam.

Ad basin truncorum. New Zealand (*Kirk* No. 309).

About a foot diameter, hard when dry. Hymenium rather gelatinous when moist, separating readily from the hymenophore. Spores of an unusual kind for *Polyporus*.

Illosporium obscurum, *Cke. & Mass.*

Sporodochiis subgregariis, orbicularibus, erumpentibus, demum subsuperficialibus, dein secedentibus, minutis, fuliginosis; hyphis abbreviatis, dichotomi-ramosis, conidiis acrogenis, solitariis, vel 2-3 catenulatis, globosis, hyalinis, 12 μ diam.

On leaves of *Eucalyptus globulus*. Melbourne (*Miss Campbell* 422).

Septoria myoporii, *Cke. & Mass.*

Epiphyllis. Maculis orbicularibus, albidis, lineo fusco cinetis. Peritheciis semi-immersis, punctiformibus, atris, sporulis linearibus, flexuosis, guttulatis 40-50 × 2 μ.

On leaves of *Myoporum insulare*. Melbourne (*Miss Campbell* 414).

Pestalozzia casuarinæ, Cke. & Mass.

Acervulis gregariis, minutis, ellipticis, pustulæformibus, epidermide fissa cinctis; conidiis fusiformibus, loculis duobus centralis fuscis, $10-12 \times 6-7 \mu$, loculo superiori conoideo, hyalino, aristato; aristis 3, divergentibus (cum conidiis $45-50 \mu$ long) basidiis hyalinis, sursum incrassatis.

In ramulis *Casuarinæ*. Melbourne (Miss Campbell 402).

Physalospora phyllodiæ, Cke. & Mass.

Peritheciis tenuissimis, immersis, cuticula nigricantia superne tectis. Ascis clavato-stipitatis, octosporis, paraphysatis. Sporidiis ellipticis, intus granulosis, continuis, hyalinis, $20 \times 8 \mu$.

On phyllodes of *Acacia suaveolens*. Melbourne (Miss Campbell 413).

Sphærella Banksiæ, Cke. & Mass.

Epiphyllis. Maculis nullis, peritheciis gregariis, subinnatis, atris, poro pertusis. Ascis clavatis, octosporis. Sporidiis biseriatis, ellipticis, didymis, hyalinis, $12 \times 5 \mu$.

On fading leaves of *Banksia integrifolia*. Melbourne (Miss Campbell 403).

***Oidium lycopersicum**, Cke. & Mass.

Casputulis effusis, indeterminatis, albis, mycelio arachnoideo, hyphis brevibus, ramulosis, erectis. Conidiis subglobosis, conatenatis, hyalinis, $8-9 \mu$ diam.

On stems and leaves of *Solanum lycopersicum*. Upper Yarra.

PHILLIPS'S "BRITISH DISCOMYCETES."*

Through several weary years Mycologists were anxiously expecting the appearance of this work, and, we doubt not, now that it has at last gladdened their eyes, they feel amply rewarded for their patience. "Hope deferred almost made the heart sick," but hopes realized made those hearts revive. It is always a source of pleasure when one takes up a book with the feeling that it is sure to represent the results of a large amount of patient labour and careful study, a feeling so utterly different from that with which one scans a piece of literary job-work, "done to order," with no heart in it, and no evidence of the least personal exertion, or personal interest, beyond getting it finished -- and paid for. The little volume before us is, after all, like its author, a modest and unobtrusive one, and yet one likely to be of great practical utility. Unfortunately, there are a few typographical blunders, which had better have been absent, but these will detract nothing from the excellencies of the "manual." There is a copious glossary of terms at the end,

* "A Manual of the British Discomycetes," by William Phillips, F.L.S. ("International Scientific Series," Vol. lxi.). London: Kegan Paul, Trench, and Co., 1887.

although we observe that in some cases our author seems to be rather in a fog, yet if they explain what he intended himself by the terms when he uses them, it is of less consequence. For example, we doubt whether, to other minds, *cinnabarine* represents "scarlet tinged with yellow," or whether *repand* is properly defined as "having an uneven slightly sinuous margin," or whether *undulated* is at all "a synonym for repand." Nevertheless, it is not our purpose to quibble over small matters of detail and forget that the main object of the book has been successfully accomplished, and a cheap manual, with twelve page plates, and a good index, delivered to subscribers for about half the price of the original estimate. We really hope that every Mycologist in these islands will at once put a copy of this work upon his bookshelf, if for nothing more, at least as a small encouragement for the performance of honest labour, for no author ever endeavoured more earnestly to do his best, and though the book is not a large one, it represents an immense mass of persistent work.

The classification adopted is intermediate between the now antiquated one of the "Handbook" and the rather extravagant ones propounded by various continental authors. It seems to us that Mr. Phillips has adopted a happy medium, and cannot be charged with unnecessary innovations. We do not observe any changes made to which we take the least exception, excepting, perhaps, the interpretation of *Vibrissea*, in which we agree to differ. On the whole, therefore, as already intimated, this "manual" receives our cordial approval, as representing the Discomycetes of Great Britain up to date, and we do not hesitate to give it our hearty commendation.

AMANITOPSIS OF SACCARDO.—This proposed sub-genus of white-spored *Agarics* is meant to agree with *Volvaria* amongst the salmon-spored species; *Acetabularia* amongst the brown-spored, and *Chitonina* amongst the purple-spored. The presence or absence of an annulus to the stem in *Amanita* and *Volvaria* is probably not of sufficient importance for sub-generic distinction; this seems to have been Fries' estimate. I do not think it has hitherto been pointed out that Sowerby has modelled one of his examples of *Agaricus volvaceus* with an *ample ring* to the stem; other examples in Sowerby's group have no ring as is usually the case. Sowerby's original model is in the public room of the British Museum. Even the *volva* is not invariably present or absent as it should be, if Nature always kept within the limits prescribed by mycologists. One of my original drawings in the British Museum collection shows a *volva* to *Psalliota*, in *Agaricus campestris*.—Worthington G. Smith.

MEMORABILIA.

Polyangium vitellinum. Specimen in Herb. Berk. received from Schweinitz is certainly *Oligonema nitens*, *Lib.*, which does not seem to have been recorded for the United States.

Theclospora bifida, *Hark.* This has been so imperfectly described, and its whole character misunderstood, that it may be of service to indicate that on examination of authentic specimens from Dr. Harkness, it is identical with *Inzengaea erythrospora*, *Borzi*, in *Pringsheim Jahrbucher*, 1885, p. 450, with 2 plates, on which it is exhaustively delineated, and its perfect condition is ascosporous. Hence *Theclospora* is a spurious genus.

Oligonema nitens, *Lib.* The specimens of *Trichia circumscissa* in Klotsch Herb. Myc. Ed. nova, No. 137, belong to this species.

Trichia scabra. The specimens of *Trichia chrysosperma* in Roumeguere's *Fungi Gallici*, No. 1683 (in our copy), belong to this species.

Trichia varia. The specimens called *Trichia chrysosperma* in Karst. *Fun. Fenn.*, No. 699, *Mustiala*, 1866. Those in Roumeguere's *Fungi Gallici*, No. 1315, and those in Desmazieres' *Crypt. Fr.* Ser. ii., No. 260, all pertain to *Trichia varia*.

Tubulina cylindrica (*Bull.*). The specimens called *Siphotychium Casparyi*, No. 2092, in Ellis and Everhart's *N. Amer. Fungi*, are typical *Tubulina cylindrica* (*Bull.*), whilst No. 2096 in the same series, called *Tubulina cylindrica*, differs in smaller spores, warted on one side, and may be called *Tubulina microspora*.

Comatracha pulchella (*Bab.*). The *Comatracha gracilis*, *Wing.* in *Ell. & Ev. N. Amer. Fungi*, No. 2094, is identical with original type specimens of *Comatracha pulchella*.

Trichia lateritia, *Lev.* The specimens of *Trichia fallax*, var. β in *Moug. & Nest.*, No. 578, and *Trichia fragilis*, f. *botrytis*, in Ellis & Everhart, *N. Amer. Fungi*, No. 2098, are all *Trichia lateritia*.

Oligonema nitens, *Lib.* To this species must also be referred the *Trichia Bararica*, *Thum.* of *Thumen Myc. Univ.*, No. 1497.

Trichia chrysosperma, *Bull.* Typical specimens of this species are contained in *Rabh. Fung. Eur.* No. 2137, under the name of *Trichia varia*.

Hemiarcyria rubiformis (*Pers.*) Our specimens of *Trichia pyriiformis*, *Hoffm.*, issued in *Saccardo Myc. Veneta*, No. 962, are certainly this *Hemiarcyria*.

Cercospora Stylosanthis, *Ell. & Ev., Journ. Myc.* III., 13 (1887), *N.A. Fungi*, No. 1764, is superseded by *Cercospora Stylosanthis*, *Speg. Fungi Guarantici* (1886), p. 216—unless both are the same species.

BRITISH PYRENOMYCETES.

By G. MASSEE.

(Continued from p. 39.)

Sub-Fam. 2. ROSELLINIÆ. Perithecia sub-superficial, smooth, naked; for the most part carbonaceous.

GEN. 1. **PSILOSPHÆRIA.** Perithecia naked, sporidia hyaline, continuous, or septate.

* ZIGNOINA. *Sporidia continuous, hyaline, guttulate.*

P. *seriata*, Curr., Sacc. Syll. 3648; Hdbk. 2668.
On rotten wood.

P. *ostioloidea*, Cke., Sacc. Syll. 3651.
On *Diatrype*. Forden.

P. *collabens*, Curr., Sacc. Syll. 3658; Hdbk. 2586.
On bark and wood. Weybridge, Twycross, Forres.

** LEPTOSPORA. *Sporidia continuous, hyaline, pseudoseptate.*

P. *spermoides*, Fr., Sacc. Syll. 3565; Hdbk. 2576.
On decaying stumps. Common.

* * BERTIA. *Perithecia rugulose, sporidia uniseptate, hyaline.*

P. *moriformis*, Tode., Sacc. Syll. 2272; Hdbk. 2577.
On wood, branches, &c. Common.

P. *lichenicola*, Not., Sacc. Syll. 2276.
On thallus of *Solorina crocea*. Ben Lawers.

*** MELANOPSAMMA. *Perithecia even, sporidia uniseptate, hyaline.*

P. *pomiformis*, Pers., Sacc. Syll. 2248; Hdbk. 2580.
On dead wood. Elmhurst, Twycross, Shere, Shrewsbury, Gopsall.

P. *pustula*, Curr., Sacc. Syll. 2251; Hdbk. 2582 (= *perexigua*, Curr.).
On wood. Bungay, Kew.

*** ZIGNOELLA. *Sporidia multi-septate, hyaline.*

P. *Keitii*, Berk., Sacc. Syll. 3620.
On rotten cordage. Glasnevin, Dublin.

P. *pulviscula*, Curr., Sacc. Syll. 3627; Hdbk. 2587.
On wood. Weybridge, Kew, N. Wootton.

P. *rhytidodes*, B. & Br., Sacc. Syll. 3640.
On ash. Batheaston.

GEN. 2. **ROSELLINIA**. Perithecia superficial, smooth, sporidia continuous, brown.

A. CALOMASTIA. Perithecia rather large, smooth.

R. mammiiformis, *P.*, *Sacc. Syll.* 938; *Hdbk.* 2589.
On wood. Shere, Lynn, Appin, N.B.

B. TASSIELLA. Perithecia rather large, rugulose.

R. moroides, *Curr.*, *Sacc. Syll.* 954; *Hdbk.* 2601.
On wood. Weybridge.
R. papaverea, *B. & Br.*, *Sacc. Syll.* 937; *Hdbk.* 2597.
On rotten stumps. Batheaston.
R. rotula, *Cooke*, *Sacc. Syll.* 897.
On sawdust, &c. Shere.

C. CONIOMELA. Perithecia small, smooth.

R. pulveracea, *Ehr.*, *Sacc. Syll.* 968; *Hdbk.* 2600.
On bark. Dinmore, Braemar.
R. myriocarpa, *Fr.*, *S.M.* ii., p. 459.
On rotten stump of broom. Dundee, Highgate, Shere, Lynn.
R. sordaria, *Fr.*, *Sacc. Syll.* 994; *Hdbk.* 2599.
On moist pine wood. Appin.

D. BOMBARDIA. Sporidia ovoid, brown, and caudate.

R. fasciculata, *Fr.*, *Sacc. Syll.* 1026; *Hdbk.* 2575.
On wood. Apethorpe, Bath, Forden, Scarboro', Orton
Wood, Twycross.

GEN. 3. **MELANOMMA**. Perithecia somewhat superficial, smooth; sporidia septate, brown.

* *AMPHISPHERIA*. Sporidia uniseptate.

M. pædida, *B. & Br.*, *Sacc. Syll.* 2740.
On beech. Langridge, Somerset.

** *MELANOMMA*. Sporidia 2-3 septate.

M. pulvis-pyrinus, *Pers.*, *Sacc. Syll.* 3223; *Hdbk.* 2591.
On bark and wood. Common.
M. pyriosticta, *Cke.*, *Grav.* xv., 83.
On wood. Twycross.
M. Stevensoni, *B. & Br.*, *Sacc. Syll.* 3243.
On rotten wood. Glamis.
M. parmeliarum, *Pl. & Ph.*, *Sacc. Syll.* 3158
On *Parmelia saxatilis*. N. Wales.

GEN. 4. **STRICKERIA**. Perithecia scattered or gregarious, superficial, sporidia muriform, brown.

* TEICHOSPORA. *Perithecia not collapsing.*

S. obducens, Fr., *Sacc. Syll.* 3894 ; *Hdbk.* 2590.

On pales, &c. Apethorpe, Batheaston, Shrewsbury, Forres.

S. vile, Fr., *Sacc. Syll.* 3226 ; *Hdbk.* 2610.

On rotten wood. Morehay, Glamis.

Sub-Fam. 3. SORDARIÆ.

GEN. 1. **SORDARIA**. Perithecia submembranaceous, for the most part growing on dung. Sporidia involved in mucus, or caudate.

A. EUSORDARIA. *Eight spored, sporidia caudate.*

* FIMICOLÆ.

S. coprophila, Fr., *Sacc. Syll.* 838 ; *Hdbk.* 2594.

On dung. Batheaston, Forden.

S. minuta, Fekl., *Sacc. Syll.* 840.

On rabbit dung. Lynn.

S. fimiseda, Ces., *Sacc. Syll.* 844.

On horse dung. Forres, N.B. On sheep dung. Lynn.

S. curvula, D'By., *Sacc. Syll.* 848.

On cow and horse dung. Rannoch, Forden, Shrewsbury, Lynn.

S. carbonaria, Plow., *Sacc. Syll.* 846.

On charred ground. Shrewsbury.

S. decipiens, Wint., *Sacc. Syll.* 852.

On cow dung. Shrewsbury.

** PHYTOGENÆ.

S. caudata, Curr., *Sacc. Syll.* 858.

On rotten wood. Blackheath, Shrewsbury.

S. sparganicola, Ph. & Pl., *Sacc. Syll.* 6303.

On *Sparganium*. Near Bristol.

B. BOVILLA. *Sporidia elongated, caudate.*

S. bovilla, Cke., *Sacc. Syll.* 4114 ; *Hdbk.* 2622. (= *Bovilla capronii*, *Sacc.*).

On cow dung. Shere, Scarboro'.

C. HYPOCOPRA, Fekl. *Sporidia not caudate.*

a. Fimicolous.

S. fimicola, Rob., *Sacc. Syll.* ; *Hdbk.* 2596.

On asses' dung. Rhyl, Darent, Shere.

- S. discospora*, *Auers.*, *Sacc. Syll.* 871.
On dung. Forden, Lynn.
S. platyspora, *Plow.*, *Sacc. Syll.* 872.
On horse dung. Forres.
S. microspora, *Plow.*, *Sacc. Syll.* 875.
On horse dung. Forres.
S. stercoraria, *Sow.*, *Sacc. Syll.* 886; *Hdbk.* 2595.
On dung. Batheaston, Shrewsbury, Albury, Lynn.
S. scatigena, *B. & Br.*, *Sacc. Syll.* 884.
On horse dung. King's Cliffe.

b. *Not fimicolous.*

- S. vesticola*, *B. & Br.*, *Sacc. Syll.* 896.
On cotton cloth. Batheaston.

D. CORROLEPA. Perithecia densely aggregate.

- S. fimeti*, *P.*, *Sacc. Syll.* 903; *Hdbk.* 2536.
On cow dung. Appin, Jedburgh.
S. merdaria, *Fr.*, *Sacc. Syll.* 904.
On dung. N. Wootton.
S. equorum, *Fckl.*, *Sacc. Syll.* 905.
On horse dung. Lynn, Shrewsbury.

E. DELITSCHIA. Sporidia uniseptate, brown.

- S. bisporula*, *Cr.*, *Sacc. Syll.* 2772.
On grouse dung. Stiperstones.
S. minuta, *Fckl.*, *Sacc. Syll.* 2776.
On dung. Forres.
S. Winteri, *Plow.*, *Sacc. Syll.* 2779.
On rabbit dung. N. Wootton.

GEN. 2. **SPORORMIA**, *Not.* Perithecia emergent, membranaceous, sporidia 4-18 celled, brown, dividing at the joints.

* *SPORORMIELLA. Sporidia 4 celled.*

- S. minima*, *Auers.*, *Sacc. Syll.* 3317.
On cow dung, &c. Hereford, Forden, Shere.
S. Notarisii, *Car.*, *Sacc. Syll.* 3319.
On grouse dung. Rannoch.
S. intermedia, *Auers.*, *Sacc. Syll.* 3323.
On rabbit dung, &c. Shere.
S. lignicola, *Ph. & Pl.*, *Sacc. Syll.* 3330.
On rotten wood. King's Lynn.

** *GENUINA. Sporidia 5 to many celled.*

- S. octomera*, *Awd.*, *Sacc. Syll.* 3337.
On dung. Forres.
S. pulchra, *Hansen*, *Sacc. Syll.* 3339.
On cow dung. Aviemore.

SOME EXOTIC FUNGI.

BY M. C. COOKE.

Agaricus (Pleurotus) platypus, *Cke. & Mass.*

Pileo carnoso, convexo, demum depresso, vel subinfundibuliformi, glabro, lævi, fulvente. Stipite excentrico, adscendente, solido, deorsum incrassato, clavato-bulboso, sursum rugoso, pallidiore. Lamellis longe decurrentibus, postice attenuatis, vix confertis, tenuibus, albidis. Sporis $10-12 \times 4-5 \mu$. Plerumque cæspitosus, esculentus.

On trunks. Nepal. India and Colonial Exhibition.

Lactarius (Dapetes) hæmorrhæus, *Lowe in Herb. Berk.*

Pileo carnoso, convexo, demum centro depresso, sæpe difformi, flavido-fusco, expallente, sericeo (2-3 unc. lat.). Stipite brevi, obconico vel ventricoso, deorsum attenuato, albido, glabro, solido ($1-1\frac{1}{2}$ unc. long, $\frac{3}{4}$ unc. crass). Lamellis subdistantibus, decurrentibus, incarnatis. Lacte copioso, sanguineo.

On the ground. Madeira (*Lowe with fig.*)

Evidently quite distinct from *L. sanguifluus*.

Marasmius cinctus, *Berk., in Herb.*

Mitis. Pileo carnosulo, convexo-campanulato (3 unc. diam.), obtuse umbonato, glabro, radiato-sulcato, umbrino-fuligineo, ad marginem zono lato ochraceo depallente, margine tenui, crenulato. Stipite subæquali, fistuloso, concolori (3-4 unc. long, $\frac{1}{3}$ unc. crass), glabro, deorsum radicali, flocculoso. Lamellis subdistantibus, ventricosus, albidis.

On wood. Venezuela.

BRITISH UREDINEÆ AND USTILAGINEÆ.—Mr C. B. Plowright announces the speedy publication of a work on this subject; price to subscribers, seven shillings and sixpence. Names of subscribers to be sent to 7, King Street, King's Lynn.

ILLUSTRATIONS OF FUNGI.

The fifth and sixth volumes of this work just completed, carry the plates to 938, finishing with the genus *Hygrophorus*. The next volume will really commence with *Lactarius*, and *Russula*, although two intermediate parts towards a supplement have been issued between. It is desired and hoped that the seventh and eighth volumes (including the supplement) will complete the work to the end of all the gill-bearing species (*Agaricini*). This is as far as the work will be carried at present. Should it be considered advisable to add *Boletus* and *Polyporus*, which it is estimated could be contained in one volume, this would be issued as a separate

work, and subscribers solicited for it entirely independently, so that the eight volumes will remain as a complete series. It seems probable that the whole will contain upwards of 1,200 plates, which will unquestionably, for number, place this work far ahead of any Atlas of *Agaricini* ever attempted. The plates of *Cortinarii* included in the above two volumes, and those of *Lactarius* and *Russula* in the succeeding volumes, will commend themselves for completeness, and it is also hoped for accuracy, not only to the present, but to a future generation. Systems may change, and names fluctuate, but trustworthy figures are generally admitted to be "things of beauty, and a joy for ever."

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var. **Mulleri**. *Fr. Hym. Eur.* 221.

Müll'eri, in honour of O. F. Müller.

Pileus obtuse, pallid, adpressedly squamose, moist, gills becoming tawny.—*Saund. & Sm. t.* 18, f. 1. *Cooke Illus. t.* 471.

var. **verruculosus**. *Lasch.*

Verruculosus = full of warts, verrucae.

Pileus compact, obtuse, yellow, scales and papillae cinnamon, stem villose-squamose.—*Cooke Illus. t.* 614.

On trunks.

513. Agaricus (Pholiota) subsquarrosus. *Fr. Hym. Eur.* 221.

Sub-squarrosus = somewhat scaly, roughish.

Pileus fleshy, convex, viscid, brown, ferruginous, with darker adpressed floccose scales; stem stuffed, equal, yellow-ferruginous, clad with darker adpressed scales which terminate in an annular zone; gills nearly free, crowded, yellow, then dirty clay-coloured.—*Fries Icon. t.* 103.

On trunks and on the ground.

Stem 3 in. long, $\frac{1}{2}$ in. thick, without a distinct ring.

†† Gills yellow, then pure ferruginous or tawny.

514. Agaricus (Pholiota) spectabilis. *Fr. Hym. Eur.* 221.

Spectabilis = of notable appearance, worth seeing.

Pileus compact, convex, then plane, dry, cuticle torn into fibrous or silky scales; stem solid, ventricose, somewhat rooting; gills adnate-decurrent, crowded, narrow, yellow, then ferruginous.—*Sow. t.* 77. *Huss. i. t.* 71. *Cooke. Illus. t.* 352.

On dead stumps.

A large and beautiful species of a golden orange colour with flesh of a sulphur yellow.

515. Agaricus (Pholiota) adiposus. *Fr. Hym. Eur.* 222.

Adiposus = fat, greasy.

Pileus compact, convex, then plane, obtuse, glutinous; stem stuffed, somewhat bulbous, yellow, squarrose as well as the pileus with superficial, evanescent, darker concentric scales; gills adnate, broad, yellow, then ferruginous.—*Berk. Outl. t.* 8, f. 2. *Cooke Illus. t.* 353.

On beech and ash trunks.

516. Agaricus (Pholiota) flammans. *Fr. Hym. Eur. 222.*

Flammans = blazing, flame-coloured.

Pileus fleshy, convex, then plane, somewhat umbonate, *dry, clothed with superficial, hairy, paler scales*; stem stuffed, then hollow, equal, rather flexuose, squamose-squamose, ring entire, yellow, as well as the fixed, crowded, quite entire gills.—*Fries Icon. t. 104. Cooke Illus. t. 368.*

In pine woods.

517. Agaricus (Pholiota) Junonius. *Fr. Hym. Eur. 223.*

Junonius of or belonging to the goddess Juno; from its beauty.

Pileus fleshy, convexo-plane, obtuse, *when dry smooth*; stem solid, equal, incurved, even, furfuraceous above the ring; gills adnate, crowded, yellow, then tawny.—*Saund. & Sm. t. 18, f. 2. Cooke Illus. t. 369.*

On trunks. Oct.

The figure given by Saunders and Smith has the pileus too squamulose. The figure in "Illustrations" is from drawing, of which copy was sent to Fries.

518. Agaricus (Pholiota) tuberculosus. *Fr. Hym. Eur. 223.*

Tuberculósus = full of tubercles or swellings; probably from the bulbous stem.

Pileus fleshy, convex, then plane, obtuse, *dry, broken up in imbricate adpressed scales*; stem hollow, incurved, short, bulbous, fibrillose, ring rather membranaceous, deciduous; gills emarginate, broad, serrulate, yellow, approaching cinnamon.—*Cooke Illus. t. 370, f. A. Fries Icon. t. 104.*

On trunks, chiefly of birch.

519. Agaricus (Pholiota) curvipes. *Fr. Hym. Eur. 223.*

Curvipes = with a curved foot or stem.

Pileus rather fleshy, convex, then expanded, *torn into adpressed floccose scales*; stem somewhat fistulose, thin, incurved, fibrillose yellow, as well as the floccose ring; gills adnate, broad, white, then yellowish, at length tawny.—*Fries Icon. t. 104, f. 3. Cooke Illus. t. 370, f. B.*

On trunks.

520. Agaricus (Pholiota) cruentatus. *Cke. & Sm. Græc. XIII, 58.*

Cruentatus = stained with blood.

Pileus fleshy, convex then expanded, obtuse, dry, yellow, breaking up into *darker adpressed scales*; margin incurved; stem

of the same colour as the *pileus*, curved, solid, attenuated at the base and rooting, *dark red brown* and sparsely squamulose below, ring fibrillose; flesh pale yellow, at length changing to *cinnabar* colour; gills rather distant, emarginate, finally separating from the stem, yellow then clay colour.—*Cooke Illus. t. 502.*

On oak stump, and also on burnt ground. Aug.

Pileus about 2 inches diam., yellow then turning red. Stem 2 inches long, $\frac{1}{4}$ in. thick above. Gills 2 lines or more. Allied to *Ag. tuberculosus* and *Ag. curripes*. Taste insipid.

* * HYGROPHANI. Gills cinnamon (not at first yellow).

Hygro-ph'ani = appearing moist.

521. Agaricus (Pholiota) paxillus. *Fr. Hym. Eur. 224.*

Paxillus, from its superficial resemblance to *Paxillus involutus*.

Pileus rather compact, gibbously convex, then expanded, even, moist, subrepand; stem *solid, long, stout*, rather attenuated, smooth, ring narrow, spreading; gills decurrent, crowded, broad, cinnamon.—*Bull t. 543, f. Q.*

On trunks.

Large, 3-5 inches, firm, wholly cinnamon. No figure has yet been secured for the "Illustrations."

522. Agaricus (Pholiota) dissimulans. *B. & Br. Ann. Nat. Hist. No. 1940.*

Dissim'ulans = appearing like something else; from its not obviously resembling any neighbouring species.

Pileus at first *lurid*, then becoming pale, obtusely campanulate, scarcely viscid, hygrophanous, then expanded, with the margin involute; stem *thickened downwards*, white, fistulose, cottony at the base; ring erect, often persistent; gills pallid clay-colour, sinuately adnate, at length decurrent.—*Cooke Illus. t. 371.*

On sticks of hawthorn and sloe.

Pileus 1 inch broad.

523. Agaricus (Pholiota) Cookei. *Fries Grev. v, 56.*

Cooke'i (dissyllable), in honour of M. C. Cooke.

Pileus fleshy, conical then convex, viscid when moist, clad with darker adpressed scales, dirty *pale yellow*, or yellowish-white, stem solid, equal, fibrillose, *reddish-brown below*, ring very thin; gills adnate, slightly ventricose, at length brown.—*Grevillea t. 82, f. 1. Cooke Illus. t. 354.*

On the ground.

Stem 2 in. long, 2 lines thick. *Pileus* 2 in. broad, figured from the original specimens sent to Fries.

524. Agaricus (Pholiota) confragosus. *Fr. Hym. Eur.* 224.

Con-frago'sus = broken, rough.

Pileus fleshy, thin, convexo-plane, obtuse, clad with *flocculose scales, hygrophanous*; margin striate; stem *fistulose*, equal, fibrillose below the membranaceous ring; gills adnate, very much crowded, rufous.—*Fries Icon. t.* 105, *f.* 2, 3.

On an old fallen elm.

Stem 3 in. long, about two lines thick. Subcæspitose, fragile. Spores oblong, ferruginous $\cdot 008 \times \cdot 004$ mm.

525. Agaricus (Pholiota) mutabilis. *Schaff. Icon. t.* 9.

Muta'bilis = changeable, variable.

Pileus fleshy, convex, then expanded, smooth, becoming pale; margin thin; stem stuffed, then hollow, *rigid, rough with scales, dark-brown at the base*; gills adnato-decurrent, crowded, pallid, then cinnamon colour.—*Fr. Hym. Eur.* 224. *Badh. i. t.* 16, *f.* 4 *a.* *Price, f.* 123. *Berk. Outl. t.* 8, *f.* 3. *Eng. Huss. ii. t.* 27. *Cooke Illus. t.* 355.

On trunks, especially lime stumps, or on the ground. Esculent.

526. Agaricus (Pholiota) marginatus. *Batsch. f.* 207.

Margina'tus = edged, margined; from the peripheral striæ of the pileus.

Pileus rather fleshy, convex, then expanded, smooth, moist, hygrophanous; margin striate; stem fistulose, soft, *not scaly*, pruinose above the fugacious ring, *base darker, clothed with whitish velvet down*; gills adnate, crowded, watery-cinnamon coloured.—*Fr. Hym. Eur.* 225. *Cooke Illus. t.* 372.

On the ground amongst firs.

527. Agaricus (Pholiota) mustelinus. *Fr. Hym. Eur.* 225.

Musteli'nus = of or belonging to a weasel, *mustēla* (or *mustella*); from its colour.

Pileus rather fleshy, campanulate, convex, even, *smooth, dry*; stem fistulose, even, pallid-whitish, farinose above the reflexed ring, *thickened at the base, and villose-white*; gills adnate, rather distant, tawny cinnamon.—*Mich. Gen. t.* 80, *f.* 6. *Cooke Illus. t.* 356 *a.*

On stumps.

Solitary. Pileus hardly an inch broad, rufous or testaceous; stem less than an inch long, thickened at the base, which is surrounded and attached by a white tomentum.

528. Agaricus (Pholiota) unicolor. *Fr. Hym. Eur.* 225.

Uni'-color = of one colour, self-coloured.

Pileus rather fleshy, campanulate, then convex, subumbonate, smooth, nearly even, hygrophanous, stem stuffed, then fistulose, nearly smooth, of the same colour, ring thin, entire, gills adnate, seceding, broad, somewhat triangular, ochraceous cinnamon.—*Cooke Illus. t.* 356 *b.*

On trunks.

Subcæspitose, small, bay-brown then ochraceous, at length the margin is striate. Stem pallid, fuliginous at the base.

C. Muscigeni—Hygrophanous. Analogous to *Galera*, with a ring.

529. Agaricus (Pholiota) pumilus. *Fr. Hym. Eur.* 226.

Pumilus = dwarfish, tiny.

Pileus somewhat fleshy, hemispherical, obtuse, even; stem fistulose, slender, sub-fibrillose; ring collar-like, rather fugacious; gills adnate, crowded, broad, pallid-yellowish.—*Cooke Illus. t.* 503 *a.*

In woods. October.

Minute. Pileus 3-4 lines broad.

530. Agaricus (Pholiota) mycenoides. *Fr. Hym. Eur.* 226.

Myceno-i'des = like a *Mycena*.

Pileus membranaceous, campanulate, then convex, deeply striate, hygrophanous; stem fistulose, slender, ferruginous, smooth as well as the pileus; ring membranaceous, white; gills adnate, rather distant, ferruginous.—*Cooke Illus. t.* 503 *b.* *A. mesodactylus.* *B. & Br. Ann. N.H. Ser. 2, ii. p.* 261, *t.* 9, *f.* 1.

On the ground, in damp dells. Oct.

Sub.-Gen. 22. INOCYBE. *Fr. Sys. Myc. i.* 254.

Inocybe, from *ἵς*, *gen. ivós* fibre, and *κύβη* = the head; from the fibrillose veil.

Universal veil fibrillose, concrete with the cuticle of the pileus; margin often free, and like a cobweb. Gills somewhat sinuate (but also adnate, and rarely decurrent), discoloured, not powdery. Spores often rough.

* **SQUARROSI.** Pileus squarrose from the first; stem scaly, of the same colour.

531. Agaricus (Inocybe) hystrix. *Fr. Hym. Eur.* 227.

Hystrix = ὕστριξ, a porcupine; from the conspicuous scalliness.

Pileus fleshy, convex then plane, stem solid, firm, *thickened upwards, squarrose in ring-like zones* with revolute floccose scales; gills broadly affixed, crowded, linear, grey, then tawny.—*Fries Icon. t. 106. Cooke Illus. t. 424.*

In beech woods.

Pileus 2.3 in. broad.

532. Agaricus (Inocybe) relicinus. *Fr. Hym. Eur. 227.*

Relicinus = bent or curled backwards, as the scales are.

Pileus fleshy, thin, conical, then expanded, obtuse, squarrose, with tomentose scales, stem *solid*, soft, equal, floccoso-squamose; gills adnexed, crowded, *yellow, then olivaceous.*

In marshy fir woods, amongst *Sphagnum*.

533. Agaricus (Inocybe) calamistratus. *Fr. Hym. Eur. 227.*

Calamistratus = curled with the curling-iron, *calamister*; from the curled scales.

Pileus fleshy, thin, campanulate, obtuse, stem solid, rigid, *base sky-blue*, squarrose everywhere *with rigid recurved scales*; gills adnexed, whitish, then ferruginous.—*Fr. Icon. t. 106. Cooke Illus. t. 389.*

In fir woods. Sept.

A noble species, remarkable for the blue colour of the base of the stem. Spores .012 mm. long, smooth.

534. Agaricus (Inocybe) hirsutus. *Lasch. Fr. Hym. Eur. 227.*

Hirsutus = shaggy, bristly.

Pileus rather fleshy, conic campanulate, acute, squarrose with scales of fasciculate hairs; stem solid, slender, fibrillose, scaly at the apex, *greenish at the base*; gills adnexed, narrow, pallid then brown.

In moist beech wood.

535. Agaricus (Inocybe) lanuginosus. *Bull. t. 370.*

Lanuginosus = woolly.

Pileus rather fleshy, hemispherical, then expanded, obtuse, floccoso-squamulose, *the scales of the disc erect and squarrose*; stem solid, thin, squamose, fibrillose with a *whitish powder* above; gills seceding, thin, denticulate, pallid clay colour.—*Cooke Illus. t. 582, A. Ag. flocculentus, Handbook No. 317.*

On the ground.

536. Agaricus (Inocybe) dulcamarus. *A. & Schw.*

Dulcamar'us = bitter-sweet.

Pileus rather fleshy, convex, umbonate, piloso-squamose. stem somewhat hollow, fibrillose and squamulose, *farinaceous at the apex*; gills arcuate, affixed, ventricose, *pallid olivaceous*.—*Fr. Hym. Eur.* 228. *Cooke Illus. t.* 582, B. A. *uniformis*, *Pers. Icon. Pict. t.* 15. f. 1.

In fir plantations.

537. Agaricus (Inocybe) plumosus. *Bolt. t.* 33.

Plumo'sus = feathery, downy.

Pileus rather fleshy, convexo-plane. disc squarrose with erect fasciculate flocci, margin fibrillose; stem stuffed, then hollow, slender, flexuose, floccoso-squamose, naked above; gills sub-adnate, scarcely crowded, ventricose, *quite entire, dingy*.—*Fr. Hym. Eur.* 228. *Cooke Illus. t.* 425, A.

In moist pine woods. Aug.

With a faint but not unpleasant odour.

538. Agaricus (Inocybe) cincinnatus. *Fr. Hym. Eur.* 228.

Cincinnati's = with curled hair.

Pileus rather fleshy, convex then plane, squarrosely scaly, stem solid, thin, squamose. gills adnexed, crowded, ventricose, *dingy, then violet*.—*Cooke Illus. t.* 425, B.

In shady woods.

539. Agaricus (Inocybe) hæmactus. *Berk. & Cke. Grer. XI.* 70.

Hæmactus = αἱμακτός, mingled with blood; from its character when touched.

Pileus fleshy, compact, obtuse, *campanulate*, floccosely fibrillose, disc subsquamose, darker; stem solid, smooth, scarcely fibrillose, whitish above, *æruiginous at the base*, nearly equal; gills adnate, pallid, at length clay-colour; flesh everywhere *turning blood-red* where touched or wounded.—*Cooke Illus. t.* 390.

On lawn. Oct.

Pileus about an inch broad, amber, margin pallid, clad with long, darker fibrils, the obtuse disc darkest, and somewhat scaly; stem nearly 2 inches long, 3-4 lines thick, æruiginous at the base, the colour penetrating through the flesh. Everywhere changing slowly to blood-red when wounded. Spores elliptical, attenuated towards one end, smooth. In some respects agreeing with *Ag. calamistratus*, but not squarrose.

** LACERI. Pileus squamose, or torn into fibrils (not cracked); stem coloured, paler than the pileus, and fibrillose.

540. Agaricus (Inocybe) pyriodorus. Pers. Syn. 300.

Pyri-odor'us = smelling like a pear, *pyrus*.

Pileus fleshy, conical, then expanded, umbonate, clad with fibrous adpressed scales; stem stuffed, firm, equal, fibrillose, pruinose, and pale above, turning reddish within; gills emarginate, rather distant, dirty white, then nearly cinnamon brown.—Fr. Hym. Eur. 228. Cooke Illus. t. 472.

In woods. Sept. Oct.

Pileus 2 in. across, broadly and strongly umbonate, the margin at length a little turned up, fibrilloso-squamulose, fleshy, pallid umber; gills adnexed, ventricose, pale; stem 2-3 in. high, 4 lines thick, fibrillose, white, when bruised somewhat of the same hue as the pileus; veil very fugacious; odour penetrating, like that of rotten pears.

541. Agaricus (Inocybe) incarnatus. Bresadola, Fung. Trid. t. 53.

Incarna'tus = made flesh-colour; *caro* = flesh.

Pileus fleshy, convex, campanulate, then expanded and gibbous, or broadly umbonate, fibrillose then squamulose, margin fimbriate, yellowish then rufescent or tinged with flesh colour (6-8 c.m. broad). Stem solid, attenuated and somewhat rooting at the base, rather fibrillose, rosy flesh-colour, white and mealy at the apex. *Flesh* of the pileus white, become deep red when broken, odour strong and persistent of pears, taste mild. Gills crowded, sinuate, adnate behind, broad, rather fringed at the edge, whitish, then greyish cinnamon; at length spotted with red, or wholly rufescent. Spores subovate ($0.009-0.011 \times 0.006-0.007$ mm.).—Cooke Illus. t. 473.

In woods. Oct.

Stem more robust than in *A. pyriodorus*, which this species resembles in habit and odour.

542. Agaricus (Inocybe) scaber. Müll. in Fr. Hym. Eur. 229.

Scaber = rough.

Pileus fleshy, conical, then convex, obtusely gibbous, sprinkled with fibrous adpressed scales; stem solid, thick, equal, silky, fibrillose, veiled; gills adnexed, crowded, dingy.—Sow. t. 207. Cooke Illus. t. 391.

543. Agaricus (Inocybe) maritimus. Fr. Hym. Eur. 229.

Marit'imus = marine, sea-side; because first found by the sea-shore.

Pileus convex, then expanded, obtuse; flocculoso-fibrillose, somewhat scaly, hygrophanous; stem solid, floccoso-fibrillose,

gills adnate, ventricose, broad, rather distant, grey, becoming ferruginous.—*Cooke Illus. t. 392.*

In sand, and by roadsides.

544. Agaricus (Inocybe) lacerus. *Fr. Hym. Eur. 229.*

La'cerus = torn.

Pileus somewhat fleshy, convex, then expanded, obtuse, umbonate, squamoso-fibrillose; stem stuffed, slender, short, *fibrillose, naked above, reddish within*; gills adnexed, broad, ventricose, white, tinged with red, then mouse-coloured.—*Cooke Illus. t. 583.*

On the ground in woods.

545. Agaricus (Inocybe) flocculosus. *Berk. Eng. Fl. v. p. 97.*

Flocculo'sus = full of flocks of wool, woolly.

Pileus subcarnose, convex, subcampanulate, umbonate, sericeo-squamulose, *tawny brown*; stem fibrillose, *pale reddish*, squamuloso-pulverulent above; gills pale, fawn-coloured, then obscurely ferruginous, ventricose, *adnate*.—*Cooke Illus. t. 393.*

On naked soil, and amongst grass.

Stem $1\frac{1}{2}$ in. long, 2 lines thick. Pileus about 1 inch. Odour of new meal.

546. Agaricus (Inocybe) Bongardii. *Weinm. Fl. Russ. p. 190.*

Bongard'ii, in honour of H. G. Bongard, a Russian Botanist.

Pileus rather fleshy, campanulate, obtuse, disc squamose, torn and fibrillose about the margin, stem solid, rigid, pallid rufous, *silky below, pulverulent and whitish above*, gills adnate, ventricose, pale-reddish then cinnamon.—*Fr. Hym. Eur. 229. Kalch. Ic. t. 20, f. 2.*—*Cooke Illus. t. 381.*

On sand hills.

With the odour of Bergamot. Stem 2-3 in. long, 2 lines thick. Pileus $1\frac{1}{2}$ in. broad, fuscescens when moist, pallid when dry, not rimose.

547. Agaricus (Inocybe) muticus. *Fr. Hym. Eur. p. 230.*

Mu'ticus = curtailed, docked; probably in reference to the obtuse pileus.

Pileus fleshy, convex then plane, *quite obtuse*, and at length depressed in the centre, squamulose, whitish, clad with brown fibrils; *stem hollow*, attenuated downwards, fibrillose, pale straw colour or becoming brownish, gills adnate, crowded, thin, white becoming tawny.—*Cooke Illus. t. 382.*

By waysides, and in woods.

548. Agaricus (Inocybe) carptus. Scop. Carn. 449.

Carptus = picked, torn.

Pileus fleshy, convex then flattened, or *depressed*, stem *hollow*, *attenuated downwards*, woolly, filamentose; gills *adfixed*, ventricose, broad, dingy brown.—Cooke *Illus. t.* 426. Fr. *Hym. Eur.* 230.

In woods.

Small, scarcely an inch broad, everywhere fibrillose.

549. Agaricus (Inocybe) deglubens. Fr. *Hym. Eur.* 230.

De-glu'bens = peeling off, as the surface of the pileus does.

Pileus somewhat fleshy, convexo-plane, obtuse, umbonate, torn into adpressed fibrils, disc somewhat scaly; stem solid, with adpressed fibrils, pallid, *apex darker, nearly*; gills adnate, ventricose, somewhat distant, dingy, then cinnamon.—Cooke *Illus. t.* 394.

In woods. Aug.

550. Agaricus (Inocybe) obscurus. Pers. *Syn.* 347.

Obscu'rus = dark.

Pileus somewhat fleshy, campanulate, then plane, umbonate, longitudinally fibrillose; disc *squamose*, bluish, then dingy; stem stuffed, sub-flexuose, fibrillose, *violet then brown*; gills uncinat, adnexed, crowded, ventricose, olivaceous, then brown.—Fr. *Hym. Eur.* 231. Cooke *Illus. t.* 427.

On the naked ground. Nov.

Subcaespitose. Odour strong, fresh whitish, lilac at the top of the stem. Spores smooth.

551. Agaricus (Inocybe) echinatus. Roth. *Cat. II. t.* 9, f. 1.

Echina'tus = set with prickles like a hedgehog, *echīnus*.

Pileus rather fleshy, campanulate, then expanded, obtuse; at first pulverulent, then squamose; stem fistulose, equal, floccoso-pulverulent below the ring; gills free, crowded, *blood-red*.—Fr. *Hym. Eur.* 231. Cooke *Illus. t.* 395.

Ag. Hookeri, Klotsch. *Eng. Fl.* v. 97. Ag. haematophyllus, Berk. *Mag. Zool. & Bot. t.* xv. f. 1.

On peat beds in gardens.

* * RIMOSI. Pileus longitudinally fibrous, soon cracked, and sometimes adpressedly squamose; stem becoming whitish, slightly tinged with the colour of the pileus, fibrillose.

552. Agaricus (Inocybe) schistus. Cooke and Smith.

Schistus = σχιστός, cleft, split.

Pileus obtusely campanulate, broadly sub-umbonate, bay brown, cracking longitudinally, rather fibrillose; stem stout,

equal, twisted, solid, paler than the pileus, gills adnate *with a decurrent tooth*, rather broad, rufescent, with a pale serrate margin.—*Cooke Illus. t. 504.* Ag. fibrosus, *Smith Icon. in Herb. Mus. Brit.*

On lawns.

Pileus 2 to 3 inches. Stem 2-3 inches long, $\frac{1}{2}$ inch thick.

553. Agaricus (Inocybe) fibrosus. *Sow. Fungi t. 414.*

Fibro'sus = fibrous.

White. Pileus fleshy, thin, obtusely campanulate, *silky, even*, at length cracked; margin flexuous, broken; stem long, *solid*, striate, *squamoso-flocculose* above; gills free, crowded, linear-lanceolate, dirty white.—*Cooke Illus. t. 454.*

In fir woods. July—Sept.

The figure in "Illustrations" is reproduced from Sowerby's original drawing, which is somewhat different in colouring from his published plate.

554. Agaricus (Inocybe) phæocephalus. *Bull. Champ. t. 555, f. 1.*

Phæoceph'alus = with the head (pileus), dusky, *φαίος*.

Pileus subcampanulate, rarely flattened and umbonate, *fuliginous*, becoming brownish, smooth; stem thick, swollen at the base, naked, straight, grey with brownish lines, white at the base; gills free, semilunate, very broad, yellowish bistre colour.—*Cooke Illus. t. 396.*

On the ground.

Pileus 2-4 in. broad; stem 3-5 in. high, 4-7 lines thick. The spores are bright ferruginous red.

555. Agaricus (Inocybe) fastigiatus. *Schæff. Icon. t. 26.*

Fastigia'tus = gabled; from the originally conical pileus.

Pileus fleshy, thin, conico-campanulate, longitudinally fibrous, and cracked; stem solid, stout, twisted, *fibrously-silky*; gills free, crowded, yellow, then brownish-olive (spores rough).—*Fr. Hym. Eur. 231.* *Berk. Outl. t. 8, f. 4.* *Cooke Illus. t. 383.*

In woods.

556. Agaricus (Inocybe) hiulcus. *Fr. Hym. Eur. 232*

Hiulcus = gaping, split, cracked.

Pileus somewhat fleshy, conical, expanded, umbonate, fibrillose, rimoso-squamoso; stem stuffed, rigid, elongated, *silky-fibrillose*, pruinose above, as well as *the flesh, pale flesh-coloured*;

gills nearly free, scarcely crowded; broad, whitish flesh-colour, darker at the base, at length olivaceous.—*Cooke Illus. t. 397.*

In woods. Sept.

Stem 2-3 in. long, 2 lines thick, rather curved, a little bulbous at the base.

557. *Agaricus (Inocybe) Curreyi.* Berk. Outl. p. 155.

Curreyi, in honour of Frederick Currey, b. 1819, d. 1881.

Pileus convex, expanded, longitudinally fibrous, slightly cracked, not umbonate; stem straight, attenuated upwards, finely fibrillose, tawny; gills yellowish, then brownish-olive, free; spores perfectly even.—*Cooke Illus. t. 398.*

In woods. Aug.

Resembling *A. fastigiatus*, but spores even.

558. *Agaricus (Inocybe) rimosus.* Bull. Champ. t. 383.

Rimosus = cracked.

Pileus fleshy, thin, campanulate, silky, fibrous, expanded longitudinally, cracked; stem solid, firm, nearly smooth, whitish, mealy above; gills free, subventricose, brownish clay-coloured.—*Fr. Hym. Eur. 232. Berk. Outl. t. 8, f. 5. Grev. t. 128. Cooke Illus. t. 384.*

Woods and waste places. June—Sept.

559. *Agaricus (Inocybe) asterosporus.* Quel. in Bull. Soc. Bot. Fr. xxvi. 50.

Asterosporus = with the spores like stars, ἀστέρης.

Similar to *Agaricus rimosus*, except in the darker colour, more distinctly bulbous base of the stem, and in the form of the spores, which are globose and spinulose, so as to appear stellate (0.12 mm. diam.).—*Sow. t. 323. Cooke Illus. t. 385.*

On the ground in woods.

560. *Agaricus (Inocybe) eutheles.* B. & Br. Ann. Nat. Hist. 1865, pl. viii. fig. 2.

Eutheles = well-suckled, thriving; θηλή = the nipple. From the prominent umbo.

Pileus expanded, strongly umbonate, undulating, fawn-coloured, shining, silky, subsquamulose; stem nearly equal, pallid, striate, solid, fibrous; gills pallid, margin white, toothed, adnate.—*Cooke Illus. t. 386. Fr. Hym. Eur. 232.*

On the ground amongst fir leaves. Aug.

Odour mealy. Spores elliptical, even.

561. Agaricus (Inocybe) margarispora. Berk. MSS.

Margaris'pora = with each spore like a pearl, *μαργαρίτης*.

Pileus campanulate, then expanded, and broadly umbonate, undulating, fawn-coloured, silky, clad with adpressed fibrillose scales; stem elongated, equal, pallid, solid, fibrillose; gills reaching the stem, scarcely adnate, pallid, *spores subglobose, verrucose*.

On the ground. Oct.

Resembling *Ag. eutheles*, but usually rather larger, differing principally in the warted subglobose spores. Pileus 2in. broad. Stem 4in. long.

562. Agaricus (Inocybe) destrictus. Fr. Hym. Eur. p. 233.

Destrictus = stript off.

Pileus fleshy, campanulate then flattened, *umbonate*, cracked, fibrillose, then lacerately squamose, *pallid becoming reddish*; stem solid, smooth, fibrillose, striate, white becoming reddish; gills *uncinate-adnate*, crowded, whitish, then greyish cinnamon.—*Fries Icon. t. 108. Cooke Illus. t. 387.*

On the ground.

563. Agaricus (Inocybe) perbrevis. Weinm. Ross. p. 185.

Per-brevis = very short; said of the stem.

Pileus rather fleshy, convex, obtusely umbonate, fibrous, or squamose, margin rather striate, at length cracked; stem stuffed, short, pallid, *clad with white fibrils*, somewhat attenuated at the base, gills uncinately adnexed, rather distant, whitish, then tawny or clay-coloured.—*Fr. Hym. Eur. 233. Cooke Illus. t. 519.*

In shady woods.

Small but rather firm, tawny or rufous, becoming yellowish. Pileus about an inch. Stem scarcely an inch long, cortinate, pruinose at the apex. Flesh white.

564. Agaricus (Inocybe) descissus. Fr. Ep. p. 233.

De-sciss-us = split, cracked.

Pileus rather fleshy, conical-campanulate, fibrillose, cracked, stem somewhat hollow, *equal, undulated, fibrillose*, whitish pulverulent above; gills nearly free, linear, crowded, whitish, then brownish.—*Batt. t. 18 f. Berk. § Br. Ann. N.H., No. 1526.*

In woods.

var. **auricomus.** Batsch. f. 21.

Auricomus = with golden hair.

Small, thin; pileus yellowish, margin striate, stem fistulose; gills fixed, ventricose, whitish, then brown.—*Fr. Hym. Eur. 233.*

In woods.

565. Agaricus (Inocybe) Trinii. *Weinm. Ross.* 194.

Trinii, in honour of the Russian Botanist—Carl Bernard Trinius.

Pileus rather fleshy, hemispherical, obtuse, longitudinally rufescent, fibrillose; stem stuffed, equal, slender, *sparingly reddish, fibrillose*, mealy; gills rounded, ventricose, cinnamon, edge whitish floccose.—*Fr. Hym. Eur.* 233. *Cooke Illus. t.* 428, B.

In grassy places.

Pileus about half-an-inch broad.

**** VELUTINI.** Pileus not rimose, enticle interwoven, fibrillose, becoming smooth or adpressedly squamose, disc even, stem polished, smooth, becoming whitish, mealy at the apex.

566. Agaricus (Inocybe) sambucinus. *Fr. Hym. Eur.* 234.

Sambu'cinus = of or belonging to elder, *sambūcus*.

White. Pileus fleshy, firm, convex then expanded, obtuse, fibrillose silky, even; stem solid, *stout, smooth, striate*, white; gills somewhat adnexed, crowded, ventricose, of one colour, whitish.—*Fr. Icon. t.* 109. *Cooke Illus. t.* 399.

In pine woods. Solitary.

567. Agaricus (Inocybe) cæsariatus. *Fr. Hym. Eur.* 234.

Cæsaria'tus = covered with long hair, *cæsaries*.

Pileus fleshy, convex then flattened, gibbous, rather tawny, clad with *tawny* fibrils or squamulose; stem solid, equal, rather fibrillose, ochraceous, growing pale; gills somewhat adnate, quite entire, *pallid ochraceous*.—*Fries Icon. t.* 109, f. 3. *Cooke Illus. t.* 388.

In beech woods.

568. Agaricus (Inocybe) lucifugus. *Fr. Hym. Eur.* 234.

Lucifugus = shunning the light; from its growing in shady places.

Pileus rather fleshy, convexo-plane, subumbonate, clad with *adpressed* fibrils or scales. Stem solid, firm, equal, smooth, subpruinose above; gills nearly free, crowded, plane, *from yellowish-white changing to olive*.—*Pers. Ic. Pict. t.* 15, f. 2. *Cooke Illus. t.* 429 A.

On the ground in woods. Sept.

Odour strong.

569. Agaricus (Inocybe) sindonius. *Fr. Hym. Eur.* 234.

Sindoni'us = of fine muslin, *σινδών* ; from the veil.

Pileus fleshy, thin, conical, then convex, gibbous, obtuse, velvety-villose, veil sub-appendiculate ; stem with a distinct medulla, at length hollow and smooth ; gills attenuated, adnexed, lanceolate, whitish, then brown.—*Sow. t.* 365. *Cooke Illus. t.* 400.

In moist, shady places.

570. Agaricus (Inocybe) Clarkii. *B. & Br. Ann. Nat. Hist., No.* 1345.

Clark'ii, in honour of J. A. Clark.

Pileus campanulate, white, silky ; stem nearly equal, flocculose, stuffed ; gills adnexed, white, marginate.—*Cooke Illus. t.* 429, B.

In shady places.

Allied to *A. sindonius*. Pileus $\frac{2}{3}$ in. across, 1 in. high ; stem $1\frac{1}{2}$ in. high, 2 lines thick ; slightly incrassated at the base.

571. Agaricus (Inocybe) geophyllus. *Sow. Fungi t.* 124.

Geophyllus, from $\gamma\eta$ = the earth, and $\varphi\acute{\alpha}\lambda\lambda\omicron\nu$ = a leaf ; probably from the clay-coloured gills.

Pileus somewhat fleshy, conical, then expanded, umbonate, even, silky-fibrillose ; stem stuffed, equal, rather firm, white ; veil fibrillose ; gills adnexed, crowded, white, dingy, then earth-coloured.—*Fr. Hym. Eur.* 235. *Cooke Illus. t.* 401.

On the ground in woods. Common.

572. Agaricus (Inocybe) scabellus *Fr. Hym. Eur.* 235.

Scabellus = roughish ; diminutive of *scaber* = rough.

Pileus rather fleshy, campanulate, then plane, when dry lacerated into scales or fibrils, umbo obtuse, even, smooth ; stem somewhat stuffed, thin, smooth, growing pale, pruinose at the apex ; gills adnexed, ventricose, rather distant, pallid.—*Cooke Illus. t.* 402.

Amongst short grass. Oct.

Pileus chestnut, sericeo-squamulose ; stem white, pruinose at the apex ; gills ventricose, adnexed, ascending, pallid.

573. Agaricus (Inocybe) Rennyi. *B. & Br. Ann. N. H. No.* 1761.

Renn'yi, in honour of J. Renny.

Small. Pileus hemispherical, fawn-colour, centre brown ;

stem attenuated downwards, fibrillose; spores kidney-shaped, nucleate.—*Cooke Illus. t. 520.*

On the ground.

Spores .012-.016 mm. Above is all the description which has been given of this species.

*** VISCIDA. Pileus becoming smooth, viscid.

574. *Agaricus (Inocybe) trechisporus.* *Berk. Outl. p. 156, t. 8, f. 6.*

Trechis'porus = with the spores rough, *τραχύς*, the Ionic (Homeric) form of *τρῆχύς*.

Pileus submembranaceous, convex, strongly umbonate, at first viscid, but soon dry and silky; stem slightly striate and mealy; gills ventricose, emarginate, scarcely adnate, pinkish-grey; spores rough.—*Fr. Hym. Eur. 236. Cooke Illus. t. 403, A.*

In woods, amongst fern. August.

575 *Agaricus (Inocybe) vatricosus.* *Fr. Hym. Eur. 236.*

Vatrico'sus = with crooked feet; from the contorted stem.

Pileus rather fleshy, convexo-plane, subumbonate, smooth, viscid, silky about the margin; stem fistulose, contorted, pulverulent; gills emarginate, ventricose, whitish, becoming brown.—*Cooke Illus. t. 403, B.*

On dead stumps and naked soil. Sept.

Small, inodorous.

576. *Agaricus (Inocybe) Whitei.* *B. & Br. Ann. N. II. No. 1527.*

White'i, in honour of F. Buchanan White.

Pileus convex, at first hemispherical, fulvous, margin white, slightly viscid, veil white, fibrillose, at length expanded; wholly fulvous, stem white, becoming brownish, nearly smooth, solid, gills at first white, annexed.—*Cooke Illus. t. 404, A.*

On the ground. Oct.

Stature that of *A. geophyllus*. A very curious and beautiful little species allied to *A. vatricosus*.

577. *Agaricus (Inocybe) tricholoma.* *Alb. & Schw. Consp. 188.*

Tricholoma, from the name of the subgenus; in reference to its habit.

Whitish, pileus rather fleshy, flattened and depressed, rather viscid, margin fringed with adpressed white hairs, stem stuffed, thin, squamulose above; gills decurrent, thin, clay-coloured, becoming tawny.—*Fr. Hym. Eur. 236. Cooke Illus. t. 404, B.*

In woods.

Sub-Gen. 23. HEBELOMA. Fr. Syst. Myc. i. 249.

Hebello'ma, from ἡβη = youth, and λῶμα = a fringe; from the veil.

Partial veil fibrillose or obsolete. Stem fleshy, fibrous. Apex somewhat mealy. Pileus at first incurved at the margin. Gills sinuate, adnexed, edge more or less of a different colour, whitish. Cuticle of the pileus continuous, smooth, rather viscid. Spores clay-coloured.

* *INDUSIATI.* Cortinate by the manifest veil, which often renders the margin of the pileus superficially silky.

578. Agaricus (Hebeloma) mussivus. *Fr. Hym. Eur. 237.*

Mussi'vus = keeping silent; *i.e.*, as regards its affinities.

Pileus fleshy, convexo-plane, obtuse, viscid, *at length squamulose*; stem solid, equal, stout, wholly fibrillose, apex somewhat pruinose, *yellowish*, as well as the emarginate, rather crowded gills.—*Cooke Illus. t. 405.*

In pine woods.

Pileus 2-4 in. Stem 4 in. long, $\frac{1}{2}$ in. thick, fleshy. Odour faint. Flesh yellow.

579. Agaricus (Hebeloma) fastibilis. *Fr. Hym. Eur. 237.*

Fasti'bilis = nauseous, disagreeable; probably from its bitter or pungent smell.

Pileus compact, convexo-plane, repand, obtuse, viscid, smooth; stem solid, firm, sub-bulbous, white, fibroso-squamose; veil evident; gills *emarginate, rather distant*, whitish, growing pallid, then clay-coloured or cinnamon.—*Schæff. t. 221. Cooke Illus. t. 406.*

In woods. July—Oct.

580. Agaricus (Hebeloma) senescens. *Butsch. Elen. f. 197.*

Senescens = growing old: from the hoary margin of the pileus and the persistently white apex of the stem.

Pileus ochraceous flesh-colour when young, slightly verging on ferruginous, somewhat viscid, convex, when older becoming plane, with the margin crispate, ferruginous yellow; stem somewhat bulbous, darker, squamose with transversely disposed pallid flocci; gills broad, pallid, then dusky ferruginous.—*Cooke Illus. t. 407.*

In pine woods.

581. Agaricus (Hebeloma) glutinosus. *Lindgr. Bot. Not. 1845, 199.*

Glutino'sus = sticky, like glue, *gluten*; from the viscid pileus.

Pileus fleshy, convex, becoming plane, obtuse, viscous with a

tenacious gluten, clad with *scattered white superficial squamules*, yellowish white, disc-like; *stem* stuffed, *nearly bulbous*, with whitish squamules, farinose at the apex, having a bark; gills adnexed with a sinus, crowded, yellowish, becoming cinnamon clay-colour.—*Fries Hym. Eur.* 238. *Icones t.* 112, f. 1. *Cooke Illus. t.* 430.

On dead leaves (beech).

582. Agaricus (Hebeloma) testaceus. *Batsch. Consp. fig.* 198.

Testa'ceus = brick-coloured; from *testa* = a brick or tile.

Pileus fleshy, campanulate, convex, obtuse, even, rather viscid; stem hollow, rather bulbous, flocculose or fibrillose, pallid, mealy above; gills attenuated, nearly free, lanceolate, crowded, ascending, pale, then ferruginous.—*Fr. Hym. Eur.* 238. *Cooke Illus. t.* 408.

In woods.

Pileus 2-3 in. Odour of radishes.

583. Agaricus (Hebeloma) firmus. *Fr. Hym. Eur. p.* 238.

Firmus = compact, firm.

Pileus fleshy, campanulate, then expanded, umbonate, viscid, brick-red, discoid; stem solid, firm, pallid, attenuated downwards, everywhere clad with floccose scales; gills rounded, crowded, dry, clay-coloured, then ferruginous, edge serrated, white.—*Pers. Ic. et Descr. t.* 5, f. 3-4. *Cooke Illus. t.* 409.

In fir woods.

584. Agaricus (Hebeloma) claviceps. *Fr. Hym. Eur.* 238.

Cla'viceps = nail-headed; from *clavus* = a nail, and *caput* = the head.

Pileus convex, then expanded; disc gibbous, fleshy, even, naked, pallid; stem stuffed, equal, everywhere sprinkled with white meal, fuscous downwards; gills emarginate, crowded, dry, pallid.—*Cooke Illus. t.* 410.

In woods.

585. Agaricus (Hebeloma) punctatus. *Fr. Hym. Eur.* 239.

Puncta'tus = marked with a point or prick, dotted.

Pileus fleshy, nearly plane, silky, becoming smooth, disc dotted with darker papillæ; stem hollow, equal, fibrillose, silky, growing pale, whitish-pruinose above; gills areolate, fixed, narrow, crowded, pallid, then ferruginous, or bay-coloured.

In pine woods. Sept.

586. Agaricus (Hebeloma) versipellis. *Fr. Hym. Eur.* 239.

Versipellis = that changes its shape or appearance. From its changeability.

Pileus fleshy, convex, plane, disc *viscid*, with a *tenacious gluten*, discoid, beyond this *silky-agglutinate*, then smooth; stem fistulose, tough, whitish and silky, pruinose above; gills rounded, crowded, broad, whitish flesh-coloured, then clay-coloured.

In grassy places, amongst fir leaves.

587. Agaricus (Hebeloma) mesophæus. *Fr. Hym. Eur.* 240.

Meso-phæus = dusky (*φαίος*) in the centre.

Pileus rather fleshy, conical, convex, then plane, viscid. even, almost naked, gilvous, disc *bay*; stem sub-fistulose, equal, slender, fibrillose, white, then ferruginous, pruinose above; gills emarginate, crowded, thin, clay-coloured or ferruginous.—*Cooke Illus. t.* 411.

In woods, &c. Common.

var. **minor.** *Cooke Illus. t.* 412.

Minor = smaller.

Smaller than the typical form.

588. Agaricus (Hebeloma) subcollariatus. *B. & Br. Ann. Nat. Hist. No.* 1942.

Sub-collaria'tus = with a collar below. From the character of the gills.

Pileus pallid, somewhat fuscous in the centre, rather fleshy, convex, slightly glutinous, the floccose veil evanescent; stem stuffed, then delicately fistulose, brown at the base and pulverulent; gills ventricose, separating, forming a short interrupted collar, clay-coloured, with a white edge.—*Cooke Illus. t.* 506.

On naked soil.

Spores elliptic, with a single nucleus '013 mm.

**** DENUDATI.** Pileus smooth, cortinate, veil absent.

589. Agaricus (Hebeloma) sinapizans. *Fr. Hym. Eur.* 240.

Sinapi'zans, from its smell of mustard, *σίναπι*.

Pileus compact, convexo-plane, sub-repand, even, smooth, slightly viscid, stem nearly solid, *stout, equal*, fibrilloso-striate, whitish, apex squamose; gills *deeply emarginate*, broad, dry, crowded, quite entire, clay-coloured cinnamon.—*Saund. & Sm. t. 2.* *Cooke Illus. t.* 413.

In moist woods.

590. Agaricus (Hebeloma) crustuliniformis. Bull. Champ. t. 308.

Crustuliniformis = of the shape of pastry, e.g., a bun.

Pileus fleshy, convexo-plane, sub-repand, smooth, slightly viscid, stem stuffed, firm, rather bulbous, flocculoso-squamose, whitish; gills adnexed, crowded, thin, whitish, then watery cinnamon; edge crenulate, guttate.—Fr. Hym. Eur. 241. Berk. Outl. p. 9, f. 1. Cooke Illus. t. 507.

In woods. Common.

var. **minor.** Cooke Illus. t. 414.

Minor = smaller.

591. Agaricus (Hebeloma) elatus. Batsch. Elench. f. 188.

Ela'tus = tall.

Pileus fleshy, convexo-plane, obtuse, even, smooth, rather viscid; stem stuffed, elongated, cylindrical, twisted, adpressedly fibrillose, apex farinaceous, growing pale; gills rounded, crowded, dry, pale ferruginous.—Fr. Hym. Eur. 241.

Amongst pine leaves.

Odour very strong; stem 4 in. long, 4 lines thick. Pileus orbicular, 3 in. broad, tan colour, margin thin; gills 3 lines broad, unspotted.

592. Agaricus (Hebeloma) longicaudus. Pers. Syn. 332.

Longi-caulus = with a long tail (*cauda*) or stem.

Pileus fleshy, convex, then expanded, even, smooth, viscid; stem almost hollow, fragile, nearly equal, white, mealy above; gills emarginate, crowded, serrulated, dry, pale clay-coloured.—Fr. Hym. Eur. 241. Berk. Outl. t. 9, f. 2. Cooke Illus. t. 415.

In woods.

var. **radicatus.** Cooke Illus. t. 416.

Radica'tus = furnished with a root, *radix*.

Stem fusiform, rooting.

593. Agaricus (Hebeloma) lugens. Fr. Hym. Eur. 241.

Lugens = mournful; from its sombre colour.

Pileus fleshy, convex, then plane, smooth, rather viscid; stem solid, shining, fibrillose striate, somewhat bulbous, at the top sprinkled with white meal; gills nearly free, fragile, crowded, pallid then ferruginous, edge crenulate, darker.

In woods.

594. Agaricus (Hebeloma) truncatus. Fr. Hym. Eur. 242.

Truncatus = maimed, shortened by being cut off, dwarfed.

Pileus compact, convex, then plane, undulated, or flexuose, smooth, rather dry; stem solid, stout, equal, entirely pruinose with white; gills emarginate or free, crowded, dry, whitish, then

flesh-coloured, at length ferruginous.—*Schaff. Icon. t. 251. Cooke Illus. t. 417.*

On the grassy base of a bank.

Pileus $1\frac{1}{2}$ -2 in. across, plane, rigid, slightly viscid, rufous, depressed in the centre, smooth, margin crisped, inflexed, the extreme edge pruinose; stem $2\frac{1}{2}$ in. high, $\frac{3}{4}$ thick, claviform at the base.

595. Agaricus (Hebeloma) nudipes. *Fr. Hym. Eur. 242.*

Nudi-pes = bare-foot; from the naked stem.

Pileus fleshy, convex, then plane, obtuse, even, nearly smooth, slightly viscid; margin thin; stem solid, equal, *pelliculose*, smooth, naked, white, fibrillose at the base; gills emarginate, crowded, dry, clay-coloured.—*Cooke Illus. t. 418.*

In woods. Coed Coch, 1880.

Stem $1\frac{1}{2}$ in. long, 4-5 lines thick. Pileus 2 inches broad, tan-coloured, becoming pallid. Odour faint, not unpleasant.

596. Agaricus (Hebeloma) capniocephalus. *Bull. Champ. t. 547, f. 2.*

Cap'nio-ceph'alus = with a smoky head or top. Would be more correctly spelt *capnocephalus*, from *καπνός* = smoke.

Pileus fleshy, convexo-plane, obtuse, even, smooth, margin at length becoming blackish; stem stuffed, *attenuated downwards*, fibrilloso-striate, with reddish striae, becoming pale, gills emarginate, broad, scarcely crowded, ferruginous.—*Fr. Hym. Eur. 242. Cooke Illus. t. 419.*

On the ground.

597. Agaricus (Hebeloma) ischnostylus. *Cooke Grev. XII. 98.*

Ischno-styl'us, from *ἰσχυρός* = thin, and *στῦλος* = a pillar, i.e., the stem.

Pileus slightly viscid, smooth, even, convex, then expanded, and broadly umbonate, white or a little pallid at the disc, inodorous (or with a faint odour of *Spiraea*), margin thin, stem slender, equal, or a little thickened at the base, solid, smooth, naked; gills rounded behind and adnate, slightly serrate at the margin, whitish then argillaceous.—*Cooke Illus. t. 420.*

On the ground, amongst grass.

Pileus 1-2 inches broad, stem 2 inches long, $\frac{1}{8}$ - $\frac{1}{6}$ inch thick. Spores $.012 \times .0075$ mm.

* * * *pusilli.* Pileus scarcely an inch broad.

598. Agaricus (Hebeloma) magnimamma. *Fr. Hym. Eur. 243.*

Magni-mamma = with a great breast. From the umbo.

Pileus with a fleshy disc, extended in a *mammiform umbo*, convexo-plane, naked, brick-red, growing pale; stem obsoletely

fistulose, equal, *smooth*, naked, *pale gilvous*; gills obtusely adnate. crowded, pallid, then ferruginous.—Cooke *Illus. t.* 508 A.

On the ground, amongst grass.

Circumference of the pileus thin, not hygrophanous.

599. Agaricus (Hebeloma) petiginosus. *Fr. Hym. Eur.* 243.

Petigino'sus = scabby.

Pileus rather fleshy, conical or convex, then expanded, *dry*; disc swollen, brown, circumference silky grey; stem stuffed, tough, slender, pulverulent, brick-red; gills free, ventricose, yellow, then olive bay.—Cooke *Illus. t.* 508 B.

On the ground in beech woods.

Pileus about half an inch broad.

Sub.-Gen. 24. FLAMMULA. *Fr. Syst. Myc., I.*, 250.

Flamm'ula, diminutive of *flamma* = flame.

Veil fibrillose, or wanting. Stem fleshy, fibrous, not mealy above. Pileus fleshy, margin at first involved (or folded in). Gills decurrent or adnate, without a sinus, commonly quite entire, of one colour.

* GYMNOTI. Veil none, pileus dry, often squamulose.

600. Agaricus (Flammula) gymnopodius. *Bull. Champ. t.* 601, *f.* 1.

Gymno-pod'ius = naked-footed; from *γυμνός* + *πούς*.

Dark ferruginous. Pileus fleshy, campanulate then convex, squamulose; stem solid, becoming smooth, equal; gills *very* decurrent, arcuate, crowded.—*Fr. Hym. Eur. p.* 244. Cooke *Illus. t.* 431.

On pine sawdust.

Stem 2 in., or more, long. Pileus 2-3 in. broad.

601. Agaricus (Flammula) vinosus. *Bull. Champ. t.* 54.

Vino'sus = full of wine, or like wine, *vinum*. From the colour.

Pileus fleshy, expanded, at length depressed, dry, ferruginous fawn colour; stem solid, firm, slightly thickened at the base, *delicately flocculose*, gills decurrent, crowded, simple, narrow, ferruginous.—*Fr. Hym. Eur.* 244. Cooke *Illus. t.* 437.

On the ground.

602. Agaricus (Flammula) floccifer. *B. and Br., Ann. Nat. Hist., No. 909.*

Floc'ifer = bearing wool; *floccus* = a flock of wool.

Cæspitose, subcarnose; pileus convex, *tawny, sprinkled with white fibrils*; stem attenuated downwards, white, with silky scales, *fistulose*, umber within; gills rather broad, adnate, ferruginous.—*Fr. Hym. Eur.* 245. *Cooke Illus. t.* 438 A.

On stumps of lime. Oct.

603. Agaricus (Flammula) decipiens. *Smith Seem. Journ.* 1869, *p.* 249, *t.* 95, *f.* 5-8.

Decip'iens = deceiving. Because it so nearly resembles *A. carbonarius* in both habitat and appearance.

Cæspitose; pileus convex, fleshy, *minutely squamulose*, dry, rich *brown*, becoming pallid; umbo almost white, stem often swollen, twisted, striate, attenuated downwards, rich tawny; gills crowded, moderately broad, decurrent, luminous brown, flesh within golden yellow, bright brown at base; spores bright tawny, ring none.—*Fr. Hym. Eur.* 245. *Cooke Illus. t.* 438 B.

On burnt earth, charcoal, &c. June.

604. Agaricus (Flammula) clitopilus. *Cke. & Sm. Græv. XIII., 59.*

Clito-pi'lus = with a sloping pileus; *κλίτος* = a slope, and *πίλος* = *pileus*, "felt."

Pileus rather fleshy, convex, disc *depressed and umbilicate*, smooth, dry, *purplish brown* (madder brown), stem *ventricose*, erect, hollow, fuliginous, with a few scattered fibrils towards the base, and brown within; gills scarcely crowded, ventricose, slightly adnexed, pallid.—*Cooke Illus. t.* 500.

Amongst firs.

Pileus 2 inches. Stem 2½-3 inches, ½ in. thick in the middle. Allied to *Ag. Weinmanni*, Fries, of which it may possibly be a variety, but differing in the pileus not being virgate, in the *ventricosus* hollow stem, and in the gills not being decurrent.

** LUBRICI. Pileus clad with a continuous, somewhat separable, smooth, viscid pellicle, veil manifest, fibrillose; spores ferruginous. Gregarious, terrestrial, rarely growing on wood.

605. Agaricus (Flammula) lentus. *Pers. Syn.* 257.

Lentus = pliant, tough, viscons. The name was given from the latter meaning; *pileus valde glutinosus*, Fries, l.c.

Pileus fleshy, convexo-plane, even, viscid; stem rather stuffed, long, equal, *squamose*; gills adnate, whitish, then clay-coloured.—*Fr. Hym. Eur.* 246. *Cooke Illus. t.* 439, 440.

On stumps.

606. Agaricus (Flammula) lubricus. *Fr. Hym. Eur.* 246.

Lubricus = slippery, slimy.

Pileus fleshy, convex, then plane, even, viscid; stem solid, rather attenuated. *fibrillose, whitish*, apex striate; gills adnate, broad, pallid, then clay-coloured.

On trunks.

607. Agaricus (Flammula) lupinus. *Fr. Hym. Eur.* 246.

Lupi'nus = of or like a wolf. *lupus*. From the colour.

Pileus fleshy, flattened or depressed, even, viscid, stem stuffed, short, firm, unequal, tinged with adpressed ferruginous fibrils, apex white; gills adnato-decurrent, rather crowded, broad, pale clay-colour.

In grassy places.

Pileus 3-4 in. broad; stem $\frac{1}{2}$ in. thick; flesh soft, white.

608. Agaricus (Flammula) mixtus. *Fr. Hym. Eur.* 246.

Mixtus = mixed, blended with its allies.

Pileus fleshy, convex, then plane, obtuse, viscid; *disc darker, rugulose*; stem hollow, curved, pallid, *with brownish fibrils*, and *rufous scales* below; gills subdecurrent, crowded, pale clay colour.—*Cooke Illus. t.* 474.

On the ground in pine woods. Inodorous.

Stem 1-3 in. long, 3-4 lines thick, somewhat flexuous, incrassated at the base. Pileus 1-2 in. broad, margin paler.

609. Agaricus (Flammula) juncinus. *Smith Journ. Bot.* 1873, p. 336.

Junci'nus = of or belonging to rushes, *junci*. From its habitat.

Pileus fleshy, $1\frac{1}{2}$ in. across, hemispherical, sulphury-yellow, with a rich brown disc; veil none, gills broad, very thin, red-brown; stem elongated, thin, 4 in. long, attenuated downwards, clothed with a few fibres; taste nauseous and disagreeable, somewhat bitter.—*Fr. Hym. Eur.* 246. *Cooke Illus. t.* 475.

On dead bullrushes in an old clay pit.

610. Agaricus (Flammula) gummosus. *Lasch. Linn. No.* 325.

Gummo'sus = full of gum, sticky.

Pileus fleshy, plane, floccoso-squamulose, then even, viscid; stem stuffed, silky, fibrillose, red brown at the base; gills adnate, crowded, *yellow, then cinnamon*.—*Fr. Hym. Eur.* 247. *Cooke Illus. t.* 441.

On old stumps. Dec.

611. Agaricus (Flammula) spumosus. *Fr. Hym. Eur.* 247.

Spumo'sus = frothy.

Pileus fleshy, thin, even, viscid; stem hollow, equal, slender, fibrillose, yellowish, then discoloured; gills adnate, yellow, at length ferruginous.—*Cooke Illus. t.* 476.

In woods.

612. Agaricus (Flammula) carbonarius. *Fr. Hym. Eur.* 247.

Carbona'rius = of or belonging to charcoal, *carbo*. From its habitat.

Pileus fleshy, becoming plane, then even, viscid; stem narrowly fistulose, slender, rigid, squamulose, pallid; gills adnate, clay-coloured brown.—*Seem. Journ.* 1868, *t.* 75, *f.* 5-8. *Cooke Illus. t.* 442.

On charcoal and burnt earth. Nov., Dec.

Sometimes with pileus 3 in. diam and stem to 4 in. long; usually smaller.

* * UDI. Cuticle of the pileus continuous, not distinct or separable, smooth, after rain moist, or rather viscid; cortina manifest, appendiculate.

613. Agaricus (Flammula) filius. *Fr. Icon. t.* 117, *f.* 1.

Fil'ius = a son; as if, a son of the earth.

Pileus fleshy, thin, convex then plane, smooth, moist after rain, gilvous; stem fistulose, long, smooth, pallid, reddish within; gills adnate, rather crowded, white then pallid.—*Cooke Illus. t.* 432.

On the ground in woods.

Stem 3-6 in. long, $\frac{1}{2}$ in. thick, equal or attenuated below, pallid, becoming reddish at the base, and within. Pileus 2-3 in. broad, even, smooth, with rather viscid cuticle, pale orange-red with the disc rufous. The figure in "Illustrations" has too yellow a tone, and is printed rather too dark in the pileus, which it was impossible to alter without cancelling the plate.

614. Agaricus (Flammula) fusus. *Batsch. Elen. f.* 189.

Fusus = a spindle. From the fusiform stem.

Pileus compact, convex then expanded, even, rather viscid, stem stuffed, firm, nearly of the same colour, fibrillose-striate, attenuated and somewhat fusiform, rooting; gills rather decurrent, pallid yellow, becoming ferruginous.—*Fr. Hym. Eur.* 247. *Cooke Illus. t.* 433, 434.

On the ground, and fallen logs.

615. Agaricus (Flammula) astragalinus. *Fr. Hym. Eur.* 248.

Astragali'nus, ἀστραγάλινος, a goldfinch. From its colouring.

Pileus fleshy, convex, then plane, discoid, at first silky about the margin, stem nearly hollow, flexuous, fibrillose or scaly,

pallid; gills adnate, crowded, pallid, then yellow, at length ferruginous.—*Cooke Illus. t. 435.*

On pine stumps.

Taste nauseous and disagreeable, like *A. melleus*. A most beautiful species, resembling in colouring *Cortinarius cinnabarinus*.

616. Agaricus (Flammula) alnicola. *Fr. Hym. Eur. 248.*

Alni'cola = living among alders, *alni*.

Pileus fleshy, convexo-plane, moist, even; from the first rather fibrillose or squamose, sometimes smooth; stem somewhat hollow, attenuated and rooting, fibrillose, yellow, becoming ferruginous; gills sub-adnate, broad, pallid, then ferruginous.—*Cooke Illus. t. 443.*

On stumps of various trees.

617. Agaricus (Flammula) flavidus. *Schæff. Icon. t. 35.*

Fla'vidus = yellowish.

Pileus fleshy, convexo-plane, equal, smooth, moist; stem somewhat hollow, fibrillose, yellow, then ferruginous; gills adnate, yellow, then ferruginous.—*Fr. Hym. Eur. 248. Cooke Illus. t. 444.*

On trunks of firs, lime, &c. Oct.

618. Agaricus (Flammula) inauratus. *Smith. Journ. Bot., 1873, p. 336.*

In-aura'tus = gilded.

Pileus fleshy, 1 in. or more across, moist, smooth, furnished with a distinct veil; gills broad, adnate, with a decurrent tooth, pale yellowish clay colour, stem incurved, sub-hollow, clothed with innate scales; taste mild, insipid; whole plant sulphury-yellow.—*Cooke Illus. 477.*

On willows.

619. Agaricus (Flammula) conissans. *Fr. Hym. Eur. 249.*

Conissans = shedding dust, κόνις. From its snuff-like spores (*sporæ tabacinae*, Bull.)

Pileus fleshy, thin, convex, then plane, equal, smooth when moist; stem hollow, silky-fibrillose, pallid; gills adnate, thin, very much crowded, pallid, becoming dingy clay-coloured.—*Bull. t. 178. Cooke Illus. t. 445.*

On dead stumps.

Often confounded with *A. fascicularis*, but with differently coloured gills and spores. Pileus yellowish-tan, rather viscid.

620. Agaricus (Flammula) inopus. *Fr. Hym. Eur. 249.*

Ino-pus, from *ἴς*, genit. *ivós*, a fibre; and *πούς* = a foot. From the fibrillose stem.

Pileus fleshy, thin, convexo-plane, moist, smooth; stem fistulose, thin, flexuose, with adpressed fibrils. at length brick-red below; gills adnate, crowded, *linear, yellowish-white*, then pallid.—*Bolt. t. 148. Cooke Illus. t. 446.*

On pine trunks.

621. Agaricus (Flammula) apicreus. *Fr. Hym. Eur. 249.*

A-pic'reus = not bitter. In this it differs from its close ally, *A. alnicola*.

Pileus fleshy, thin, nearly plane, even, smooth. moist; stem hollow, equal, pallid, ferruginous at base; gills adnate, crowded, thin, *bright ferruginous*.—*Bull. t. 554. A. (B. major). Cooke Illus. t. 436.*

On rotten trunks.

*** SAPINEI. Pileus scarcely pelliculose (but the flesh is easily cut, or in the upper part torn into scales). not viscid (at first with a slight bloom). veil fibrillose, adpressed to the stem, not appendiculate, generally absent, or forming a ring round the stem. Subcæspitose, growing on conifers.

622. Agaricus (Flammula) hybridus. *Fr. Hym. Eur. 250.*

Hybridus = mongrel, hybrid. As if not a distinct species.

Pileus fleshy, hemispherical, then expanded, obtuse, smooth, even, moist; stem stuffed, soft, attenuated upwards, tawny, with a whitish veil, *which forms a ring*; gills adnate, rather crowded, pale yellow, then tawny.—*Cooke Illus. t. 615.*

On fir stumps.

623. Agaricus (Flammula) sapineus. *Fr. Hym. Eur. 251.*

Sap'ineus = of or belonging to the fir-tree, *sapinus*. From its habitat.

Pileus compact, convexo-plane, very obtuse, *finely floccoso-squamulose*, then cracked; stem rather stuffed, thick, sulcate, rooting, yellowish, without a ring; gills adnate, broad, *golden-yellow*, then tawny cinnamon.—*Pers. Ic. & Descr. t. 4, f. 7. Cooke Illus. t. 447.*

On fallen branches of Scotch fir, and chips and sawdust about a saw-pit. Aug. On charcoal heaps in woods.

624. Agaricus (Flammula) liquiritiæ. *Fr. Hym. Eur. 251.*

Liq'viritiæ = of liquorice, γλυκίρριζα. From its sweet taste.

Pileus rather fleshy, easily cut, convexo-plane, somewhat umbonate, smooth, moist, margin at length slightly striate; stem hollow, fibrous, striate, at first silky white, dusky ferruginous; gills adnate, then rounded, crowded, broad, golden-yellow, then dusky ferruginous.

On larch trunks.

625. Agaricus (Flammula) picreus. *Fr. Hym. Eur. 251.*

Pic'reus = bitter.

Pileus rather fleshy, convex, then expanded, even, smooth; stem fistulose, thin, almost nuber, attenuated upwards, without a veil, at first pulverulent; gills adnate, subseceding, crowded, narrow, yellow then ferruginous.—*Pers. Ic. Descr. t. 4, f. 7. Cooke Illus. t. 448.*

On old deal boards and pine stumps.

*** SERICELLI. Cortinate, cuticle of the pileus rather silky, dry, or at first viscid.

626. Agaricus (Flammula) ochrochlorus. *Fr. Hym. Eur. 252.*

Ochro-chlor'us = yellowish-green.

Cæspitose. Pileus fleshy, convex then plane, obtusely umbonate, dry, minutely silky, rather squamulose, greenish straw-colour; stem hollow, squamose, clad with white flocci, flexuous, at the base and within ferruginous; gills adnate, crowded, whitish then greenish, at length olivaceous.—*Cooke Illus. t. 616.*

On old trunks.

Size and habit of *Ag. fascicularis*, but spores puro ferruginous.

627. Agaricus (Flammula) helomorphus. *Fr. Hym. Eur. 252.*

He'lo-morphus = nail-shaped; from ἦλος = a nail, and μορφή = shape, form.

White; pileus fleshy, convexo-plane, gibbous, unequal, viscid, when dry silky, becoming even; margin naked; stem solid, unequal, curved, even, nearly smooth; gills adnato-decurrent, crowded, white, then tan coloured.—*Cooke Illus. t. 449 A.*

In pine woods.

628. Agaricus (Flammula) scambus. *Fr. Hym. Eur. 253.*

Scambus, σκαμβός, crooked, bent. From the shape of the stem.

Pileus somewhat fleshy, convexo-plane, then slightly depressed, and floccoso-villose, viscid in moist weather; stem

rather stuffed, *short, incurved, flocculose, and veiled*, white, attenuated below; gills subdecurrent, yellowish clay-coloured.—*Cooke Illus. t. 449 B.*

On larch.

629. Agaricus (Flammula) filiceus. *Cooke Seem. Journ. (1863), p. 66, t. 3, f. 1.*

Filic'eus = of or belonging to fern, *filix*.

Pileus fleshy, convexo-plane, minutely squamuloso-fibrillose; stem stuffed, equal, slender; veil adhering to the stem and margin of pileus in reddish fugacious threads; gills crowded, adnate, sulphur yellow, at length tawny cinnamon.—*Fr. Hym. Eur. 253. Cooke Illus. t. 450.*

On old tree-fern stems. Doubtful native.

Sub-Gen. 25. NAUCORIA. *Fr. Syst. Myc. i. 260.*

Nauco'ria. Fries (S.M. i. 260) says: "The veil reminds one of *naucum*, whence the name." *Naucum* is a kind of vessel hollowed like a ship (Ducange).

Veil none, or fugacious, squamulose. Stem cartilaginous, fistulose or spongy. Pileus more or less fleshy, convexo-plane or conical, margin at first inflexed; gills free or adnate, not decurrent.

a GYMNOTI. Pileus smooth. Veil none. Spores ferruginous, but not becoming dingy.

* *Gills free, or slightly adnexed.*

630. Agaricus (Naucozia) lugubris. *Fr. Hym. Eur. 253.*

Lugu'bris = mournful, from the sombre colour.

Pileus fleshy, campanulate, then expanded, undulate, gibbous, even, smooth, *pallid, then ferruginous, opaque*; stem stuffed, rigid smooth, *fusiform, rooting*, pallid; gills free, very broad, crowded, pallid, then ferruginous. *Fr. Icon. t. 121, f. 1.*

On the ground amongst grass.

Stem 4 in. long, 4 lines thick. Pileus 3 in. broad.

631. Agaricus (Naucozia) festivus. *Bolt. Fungi t. 70.*

Festi'vus = handsome. *Species nobilissima*, Fries, l.c.

Pileus submembranaceous, *globoso-campanulate, umbilicate, punctulate*; margin incurved, somewhat lobed; stem fistulose, slender, *silky fibrillose*, white; gills attenuated, adnate, ascending, slightly lobed, cinnamon.—*Fr. Hym. Eur. 258. Cooke Illus. t. 490A.*

On the ground amongst firs.

632. Agaricus (Naucoria) hamadryas. *Fr. Hym. Eur.* p. 254.

Hamadry'as, Ἀμαδρυ'άς, one of the Nymphs whose life depended upon that of the trees to which they were attached.

Pileus rather fleshy, convex, then expanded, gibbous, even, ferruginous-bay, when old and dry of a fleshy red; stem hollow, equal, smooth, pallid; gills *attenuated, adnexed*, almost free, ferruginous. *Fr. Icon. t.* 121, *f.* 3.

In woods.

Pileus 1½-2 in. broad; stem 2-3 in. long, 3 lin. thick, fragile.

633. Agaricus (Naucoria) cidaris. *Fr. Hym. Eur.* 253.

Cid'aris, κιδ'αρις, a diadem, tiara.

Pileus rather fleshy, *conical then campanulate*, even, clay coloured cinnamon, when dry tan-coloured, margin undulated, striate, stem hollow, *fusiform*, short, smooth, *dark brown*, gills affixed, then seceding, ventricose, crowded, honey-coloured.—*Cooke Illus. t.* 451.

In pine woods, and on the ground around trunks.

Pileus an inch high and broad, or more; stem 1½ in. long. Inodorous.

634. Agaricus (Naucoria) cucumis. *Pers. Syn.* 310.

Cu'cumis = a cucumber, from the smell.

Pileus somewhat fleshy, broadly campanulate, smooth, when moist bay-brown about the margin, growing paler; stem thin, firm, smooth, *dark brown*, turning black, thickened at the apex, *hollow, pruinose*; gills slightly adnexed, ventricose, pallid saffron-yellow.—*Fr. Hym. Eur.* 255. *Cooke Illus. t.* 452. *Sow. t.* 344.

Amongst sawdust.

635. Agaricus (Naucoria) anguineus, *Fr. Hym. Eur.* 255.

Anguin'eus = snake-like; from the appearance of the stem.

Pileus slightly fleshy, campanulate, then convex, gibbous, smooth, yellowish tan-coloured, with a silky zone around the margin; stem rather hollow, brown, and *thickly covered with white fibrillæ*; gills nearly free, crowded, linear, pale-yellow, then ferruginous.—*Fries Icon. t.* 122, *f.* 1. *Cooke Illus. t.* 455.

In a flower-pot. Nov.

Stem 2-3 inches long by 2-3 lines thick; pileus 2 inches broad.

636. Agaricus (Naucoria) centunculus. *Fr. Hym. Eur.* 255.

Centun'culus = a small patch or patch-work; from the coloration.

Pileus somewhat fleshy, convexo-plane, obtuse, *lurid-greenish, then yellowish*, turning pale; stem fistulose, with whitish down at the base, pulverulent above; gills adnate, then seceding, *thick, broad, cinereous yellow*, as well as the stem.—*Cooke Illus. t.* 601A.

On rotten wood. Oct.

637. Agaricus (Naucoria) horizontalis. *Bull. Champ. t. 324.**Horizontalis* = horizontal, level.

Pileus somewhat fleshy, plano-convex, obtuse, even, smooth; stem solid, very short, incurved, naked; gills rounded behind, free, broad, plane. The whole plant of a watery cinnamon colour.—*Fr. Hym. Eur. 256. Cooke Illus. t. 601 B.*

On elm trunks.

638. Agaricus (Naucoria) semiflexus. *B. & Br. Ann. N. H. No. 1246.**Semi-flexus* = half-bent; referring to the stem.

Pileus hemispherical, chestnut colour, hygrophanous, margin fringed with a delicate white veil; flesh white; stem semi-horizontal, solid; gills distant, adnexed, brownish; spores echinulate.—*Cooke Illus. t. 509 A.*

On the side of a bank. Oct.

Pileus $\frac{1}{2}$ in. across, subcampanulate, then hemispherical, or flattened above, moderately fleshy; stem $\frac{3}{4}$ in. high, $\frac{2}{3}$ line thick; spores oblong, .0003-.0004 long, .00025-.0003 in. wide.

639. Agaricus (Naucoria) rimulincola. *Rabh. Ers. No. 1511.*

Rimul-in'cola, from *rimula* = a crack or fissure, and *incola* = an inhabitant; from its habitat on twigs.

Cinnamon, pileus hemispherical, umbilicate, plicate, rugulose-tomentose; stem somewhat excentric, short, incurved, a little thickened at the base; gills adnexed, rather distant, thick, very broad, whitish crenulate.—*Fries Hym. Eur. 256. Cooke Illus. t. 509 B.*

On twigs.

640. Agaricus (Naucoria) rubricatus. *B. & Br. Ann. Nat. Hist. No. 1873.**Rubricatus* = coloured red.

Cæspitose, white, then reddish tinted; pileus small, at length becoming plane; stem slender. *Cooke Illus. t. 509 C.*

On decayed twigs.

It was growing on a bramble twig. The largest specimen was scarce half an inch high, and the diameter of the pileus about a quarter of an inch; the stem hollow, sprinkled with delicate mealy granules at the base, and about half-way up; gills adnexed behind and narrowed in front, whitish, then flesh-coloured, becoming brownish.—*Grevillea x, Dec., 1881.*

** *Gills adnate, pileus convexo-plane.*

641. Agaricus (Naucoria) abstrusus. *Fr. Hym. Eur. p. 257.*

Abstrusus = hidden, concealed; as by the leaves among which it grows.

Pileus rather fleshy, convex, obtuse, even, smooth, viscid, ferru-

ginous clay colour; stem fistulose, rigid, smooth, *ferruginous*; gills adnate, crowded, plane, watery, ferruginous.—*Cooke Illus. t. 456.*

On sawdust.

Pileus $1\frac{1}{2}$ in. broad.

642. Agaricus (Naucoria) innocuus. *Lasch, No. 398.*

Innocuus = harmless.

Pileus rather fleshy, convex, obtuse, becoming rather smooth (fibrillose under a lens), *striate*; rufous, growing pale; stem stuffed, whitish-fibrillose; gills adnate, somewhat crowded, ochraceous-yellow.—*Fries Hym. Eur. 257. Cooke Illus. t. 489 A.*

On the ground in moist places.

643. Agaricus (Naucoria) cerodes. *Fr. Hym. Eur. 257.*

Cero'des, κηρώδης, wax-like.

Pileus rather fleshy, convex, then plane, obtuse, orbicular, even, smooth, hygrophanous; stem hollow, equal, *naked, yellow, ferruginous at the base*; gills plane, broad, ochraceous-cinnamon.—*Cooke Illus. t. 489 B.*

On burnt soil.

644. Agaricus (Naucoria) melinoides. *Fr. Hym. Eur. 257.*

Melinoi'dus = like honey, μέλι.

Pileus somewhat fleshy, *convexo-plane*, obtusely umbonate, even, smooth, dusky, ochraceous when dry; stem hollow, slightly thickened, *pruinose above and yellow*, base white; gills adnate, triangular, toothed, honey-coloured.—*Berk. Outl. t. 9, f. 3. Cooke Illus. t. 457 A.*

On lawns. Oct.

645. Agaricus (Naucoria) pusiolus. *Fr. Hym. Eur. 258.*

Pusi'olus = a little boy. From its smallness.

Pileus slightly fleshy, hemispherical, then expanded, obtuse, even, smooth, *rather viscid*; stem fistulose, *filiform, smooth, yellow, shining*; gills adnate, crowded, plane, pallid, then cinnamon.—*Pers. Myc. Eur. No. 272, t. 25, f. 1. Cooke Illus. t. 457 B.*

On the ground.

Stem 1 in. or more, rather viscid, lemon-yellow. Pileus 3 lin. tawny yellow.

* * *Gills adnate, pileus campanulate, then expanded.*

646. Agaricus (Naucoria) nuceus. *Bolt. Fungi, t. 70.*

Nu'ceus = of or belonging to a nut, *nux*. From its shape.

Pileus submembranaceous, *globoso-campanulate, umbilicate, punctulate*; margin incurved, somewhat lobed; stem fistulose, slender, *silky-fibrillose*, white; gills attenuated, adnate, ascending, slightly lobed, cinnamon.—*Fr. Hym. Eur. 258. Cooke Illus. t. 490 A.*

On the ground amongst firs.

647. Agaricus (Naucoria) glandiformis. *Smith, Grev. XIII, 59.*

Gland'i-formis = of the shape of an acorn, *glans*.

Pileus at first obtusely campanulate, becoming somewhat hemispherical, or *filbert-shaped*, nut-brown, smooth, even, stem erect, elongated, equal, stuffed, then hollow, pallid, sometimes twisted. Gills *very broad*, rounded behind, adnate, umber. Spores broadly almond-shaped ($\cdot 01\text{--}\cdot 012 \times \cdot 006\text{--}\cdot 008$ mm.).—*Cooke Illus. t. 490 B.*

On the ground. Oct.

Pileus nearly an inch broad and high, nut-brown colour, disc darker. Stem 3-4 inches long, 2 lines thick, pallid.

648. Agaricus (Naucoria) badipes. *Fries Hym. Eur. 259.*

Badipes = bay (*badius*) at the foot. Referring to the stem.

Pileus rather membranaceous, campanulate-convex, somewhat umbonate, smooth, pellucidly striate to the umbo when moist, stem hollow, equal, rigid, *ferruginous*, *variegated* to the middle with fibrillose *white scales*; gills adnate, ventricose, rather distant, grey-ferruginous.—*Cooke Illus. t. 491 A.*

In damp places.

649. Agaricus (Naucoria) scolecinus. *Fr. Hym. Eur. 258.*

Scol'ecinus = worm-eaten; from *σκόληξ* = a worm.

Pileus rather fleshy, campanulate, then convex or plane, smooth, margin slightly striate, *ferruginous-bay*; stem fistulose, equal, ferruginous, or *rufous-ferruginous*, *sprinkled with white meal*; gills adnate, rather distant, pale flesh-colour, then ferruginous, edge flocculose.—*Cooke Illus. t. 491 B.*

On moist ground under alders. Sept.

Spores apiculate, $\cdot 0003$ in. long, $\cdot 0013$ in. wide; stem 2-3 in. long, 1 line thick; pileus $\frac{1}{2}$ in. broad, ferruginous-bay, paler at the margin.

650. Agaricus (Naucoria) striæpes. *Cooke, Grev. XIII., 60.*

Striæ'pes = with *striæ* (lines) on the foot. From the striate stem.

Cæspitose, or gregarious. Pileus campanulate, obtuse, then expanded, ochraceous, smooth, even; stem erect or flexuous, equal, hollow, white, *longitudinally striate*; gills rather distant, slightly adnate behind, tawny ferruginous.—*Cooke Illus. t. 478.*

Amongst grass on lawn.

Pileus 1-1½ inches. Stem 2 to 3 inches long, 2 lines thick.

651. Agaricus (Naucoria) sideroides. *Bull. Champ. t. 588.*

Sider'oides = like iron, σίδηρος. Because the stem is ferruginous at the base.

Pileus rather fleshy, campanulate, then expanded, *umbonate*, smooth, slightly viscid; stem stuffed, attenuated, even, pallid; gills with a *decurrent tooth*, *uncinate*, *fixed*, narrow, crowded, pallid ochraceous, then cinnamon.—*Cooke Illus. t. 458 A.*

On the trunk of an ash tree. Nov.

Spores .0004 to .0005 in. long, half as much wide.

652. Agaricus (Naucoria) triscopos. *Fries Hym. Eur. 259.*

Tris'co-pus: said to be from θρίξ, genitive τριχός, a hair; and ποῦς = a foot. From the hair-like stem. If so, it may be a misprint for *trichopus*. Derivation therefore uncertain.

Pileus rather fleshy, conical, then hemispherical, obtuse, then convex and umbonate, even, smooth, bay-brown, ochraceous when dry; stem minutely fistulose, *filiform*, smooth, ferruginous, umber at the base; gills adnate, thin, rather crowded, dark ferruginous.—*Cooke Illus. t. 458 B.*

On old wood in a copse.

Pileus about half-an-inch broad; stem an inch long.

b. PHÆOTI. Pileus naked, gills and spores dingy, ferruginous. Veil potential, but rarely manifest.

* PEDIADEI. *Growing in cultivated fields.*

653. Agaricus (Naucoria) vervacti. *Fr. Hym. Eur. 260.*

Vervacti = of fallow ground.

Pileus fleshy, convexo-plane, umbonate, even, smooth, viscid; shining when dry; stem *stuffed*, then hollow, attenuated, smooth, rigid, rootless, whitish; gills adnate, with a decurrent tooth, crowded, then ventricose, pallid, then ferruginous-brown.—*Cooke Illus. t. 617 A.*

In meadows, gardens, &c.

654. Agaricus (Naucoria) pediades. *Fr. Hym. Eur. 260.*

Pediades = of the plain or field, πεδίον.

Pileus somewhat fleshy, convexo-plane, obtuse or depressed, dry, at length opaque; stem *medullate*, rather *flexuous*, slightly *silky*, yellowish, base somewhat bulbous; gills adnexed, broad, subdistant, brownish, then dirty cinnamon.—*Cooke Illus. t. 492.*

In pastures. Nov.

655. Agaricus (Naucoria) arvalis. *Fries Hym. Eur.* 261.

Arva'lis = pertaining to a cultivated field, *arvum*.

Pileus rather fleshy, tough, convex, then plane, growing pale when dry. Stem *fistulose* (stuffed) *thin pulverulent*, becoming yellowish, *with a long filiform root*; gills adnexed, rather distant, tawny then ferruginous.—*Cooke Illus.*, t. 479, variety.

On the ground.

The plant figured is not the typical form. Pileus $\frac{3}{4}$ to $1\frac{1}{2}$ inches. Stem $1\frac{1}{2}$ to $2\frac{1}{2}$ in. With a distinct bulb between the ascending and descending portion of the stem. It is probably a distinct variety.

656. Agaricus (Naucoria) semiorbicularis. *Bull. Champ. t.* 422.

Semi-orbicular'is = hemi-spherical.

Pileus rather fleshy, hemispherical, then expanded, even, smooth, rather viscid, at length rivulose; stem slender, tough, almost straight, pallid, *ferruginous, shining, with a separable pith*; gills adnate, very broad, crowded, pallid, then ferruginous.—*Fr. Berk. Outl. t.* 9, f. 4. *Cooke Illus. t.* 493 A.

On lawns and pastures.

657. Agaricus (Naucoria) tabacinus. *D.C. Fl. Fr. v.*, 46.

Tabaci'nus = pertaining to tobacco; snuff-coloured.

Bay-brown. Pileus rather fleshy, nearly plane, very obtuse, even, smooth, hygrophanous, *margin involute*, stem hollow, smooth; gills adnate, crowded, plane, at length *cinnamon-bay*.—*Fries Hym. Eur.* 261. *Cooke Illus. t.* 493 B.

By waysides.

**** SCORPIOIDEI.** *Growing in woods and moist uncultivated places.*

658. Agaricus (Naucoria) tenax. *Fr. Hym. Eur.*, p. 261.

Tenax = holding fast, tenacious. From the damp and sticky pileus.

Pileus rather fleshy, campanulate, then expanded, smooth, slightly viscid, hygrophanous; stem stuffed, then hollow, equal, *yellow, becoming tawny, striate with adpressed fibrils, becoming smooth, veil fugacious*; gills adnate, rather distant, edge entire, whitish.—*Cooke Illus. t.* 617 B.

On grassy walk and on sticks.

Pileus usually cinnamon colour, ochraceous when dry; stem becoming ferruginous or olivaceous; gills pallid, olivaceous, becoming ferruginous.

659. Agaricus (Naucoria) myosotis. *Fr. Hym. Eur.* 261.

Myosotis = forget-me-not. From the coloration.

Pileus rather fleshy, convex, expanded, rather umbonate, covered with a viscid pellicle, becoming discoloured; stem hollow, slender, *pallid, clad with squamose fibrils*, which form a *cortinate veil*; gills adnate, decurrent, rather distant, at length ferruginous brown, *edge serrate*, white.—*Fr. Icon. t.* 125, *f.* 1. *Cooke Illus.* 494.

In moist places.

Pileus of a peculiar colour, from olivaceous or greenish-brown to yellowish. The specimens figured are of rather larger size than usual. "Pileus hygrophanous, viscid when moist, minutely rugulose, dark honey-yellow; disc darker, silky veil remaining in tufts at the margin; gills rather distant, ventricose, with a decurrent tooth, margin minutely serrulate, paler, at first pale yellow with a pink tinge, then ferruginous. Stem long, hollow striate, mealy at the apex, whitish, then rufous, with silky fibrillose scales and evanescent fibrillose ring." Pileus 2 in., stem 6 in.

660. Agaricus (Naucoria) temulentus. *Fr. Hym. Eur.* 262.

Temulentus = drunk, dripping; hygrophanous.

Pileus rather membranaceous, campanulate, then convex, smooth, hygrophanous, margin slightly striate; *stem fistulose, thin, tough, polished, flexuose, smooth, pulverulent above*; gills attenuated behind, adnate, rather distant, lurid umber, then ferruginous.—*Batsch. t.* 7. *Cooke Illus. t.* 459.

In moist woods.

Slender, pileus ferruginous, ochraceous, tan-colour when dry, and without striæ. Veil none.

661. Agaricus (Naucoria) latissimus. *Cooke Grev.*

Latissimus = very broad, from the gills.

Pileus subglobose, then hemispherical, with a fleshy disc; margin at first incurved; stem attenuated downwards, *rooting*, hollow, smooth, dark-brown below, pallid above; gills *very broad, rounded behind, slightly adnate, tawny-umber*.—*Cooke Illus. t.* 482.

In churchyard.

Pileus $\frac{1}{2}$ to $1\frac{1}{2}$ in. broad. Stem $1\frac{1}{2}$ to 2 in. long, 2.4 lines thick at the apex.

c. LEPIDOTI. Pileus flocculose or squamulose. Veil manifest. Spores ferruginous.

* *Pileus clad with fugitive superficial scales.*

662. Agaricus (Naucoria) porriginosus. *Fr. Hym. Eur.* 263.

Porriginosus = full of scurf.

Pileus rather fleshy, convex, then plane, obtuse, *viscid, dingy, growing pale, clad with superficial, evanescent, saffron-coloured*

flocci; stem fistulose, equal, rather soft, silky, becoming smooth, pallid; *gills adnate*, quite entire, crowded, yellow then cinnamon.—Cooke *Illus. t.* 510.

Amongst twigs.

663. Agaricus (Naucoria) sobrius. *Fr. Hym. Eur.* 263.

Sobrius = not drunk, sober; not hygrophaneous.

Pileus somewhat fleshy, convexo-plane, slightly viscid, subsilky; disc darker, *veil pruinose, fugacious*; stem nearly fistulose, brownish at the base, clad with white flocci; gills adnate, crowded, broad, pallid, saffron-yellow.—Cooke *Illus. t.* 511 A.

On the ground. Sept.

var. **dispersus.** *B. & Br.*

Dispersus = scattered; i.e., not gregarious.

Pileus convex, ochraceous, delicately punctulate; margin furfuraceous; stem incrassated above or equal, furfuraceous, fistulose; ring appendiculate; gills pallid, adnate, plane.—Cooke *Illus. t.* 511 B.

On lawns amongst short grass. July.

Pileus 3-4 lines across; stem $\frac{3}{4}$ -1 in. high, 1 line thick; margin of gills white.

**** *Pileus innate-squamulose.***

664. Agaricus (Naucoria) erinaceus. *Fr. Hym. Eur.* 263.

Erinaceus = a hedgehog. From the prickly scales.

Pileus rather fleshy, convex, *subumbilicate, squamose with fasciculate hairs*; stem slender, fistulose, short, incurved, hairy; gills adnate, rather crowded, quite entire.—*Fr. Epicr. Sow. t.* 417. Cooke *Illus. t.* 480 A.

On dead sticks.

665. Agaricus (Naucoria) siparius. *Fr. Hym. Eur.* 263.

Siparius, from *siparium* = a small curtain. From the veil.

Pileus rather fleshy, plane, obtuse; stem stuffed, pruinose above, clothed, as well as the pileus, with downy scales; gills adnate, broad, rather distant, floccose at the edge.—Cooke *Illus. t.* 480 B.

On soil, fern stems, &c.

666. Agaricus (Naucoria) conspersus. *Pers. Ic. & Desc., t.* 12, f. 3.

Conspersus = besprinkled; e.g., with scales.

Pileus rather fleshy, convexo-plane, obtuse, nearly even, at length mealy, and broken up into scales, hygrophaneous; stem

fibrillose, brownish cinnamon; gills adnate, rather receding, crowded, cinnamon colour.—*Fr. Hym. Eur.* 264. *Cooke Illus. t.* 512 A.

In woods and moist places. Sept.

667. Agaricus (Naucoria) escharoides. *Fr. Hym. Eur.* 264.

Escharoides, ἐσχάρωδης, scab-like. Referring to the scabby scales.

Pileus rather fleshy, conico-convex, then expanded, obtuse, squamuloso-furfuraceous, becoming pallid; stem fistulose, flexuous, with adpressed fibrils, at length smooth and pallid; gills fixed, lax, ventricose, pallid, clay-colour or cinnamon.—*Cooke Illus. t.* 512 B.

On bare ground. Aug.

* * *Pileus destitute of scales, silky or atomate.*

668. Agaricus (Naucoria) carpophilus. *Fr. Hym. Eur.* 265.

Carpophilus = loving fruit, καρπός.

Pileus submembranaceous, convex, obtuse, mealy with shining atoms (not pilose, rarely squamulose); stem somewhat stuffed, short, slender, mealy, then naked, pallid; gills rounded behind, adnexed, nearly free, broad, rather distant, crenulate, ochraceous.—*Cooke Illus. t.* 513 A.

On the pericarps and leaves of beech. Sept.

669. Agaricus (Naucoria) graminicola. *Nees, Sys. f.* 186.

Gramini'cola = dwelling among grass, gramen.

Pileus somewhat membranaceous, convex, papillate, hairy tomentose; stem slender, tough, hirsute, becoming tawny; gills slightly adnexed, rather distant, pallid, ochraceous.—*Fr. Hym. Eur.* 265. *Cooke Illus. t.* 513 B.

On grass.

Pileus 3 lines broad, under a lens seen to be covered with strigose hairs, brown, becoming ochraceous, fawn-coloured.

Sub-Gen. 26. PLUTEOLUS. *Fr. Hym. Eur.* 266.

Plute'olus, diminutive of *Pluteus*, q.v.

Pileus rather fleshy, viscid, conical or campanulate, then expanded, margin at first straight, adpressed to the stem. Stem somewhat cartilaginous, distinct from the hymenophore. Gills free, rounded behind.

670. Agaricus (Pluteolus) aleuriatus. *Fr. Hym. Eur.* 266.

Aleuria'tus = covered with flour, ἄλευρον; pulverulent.

Pileus submembranaceous, conico-convex, then plane, viscid, not wrinkled, *striate*; stem slender, *pulverulent*, rather incurved, white; gills free, ventricose, ochraceous saffron-colour.

On rotten sticks. Oct.

671. Agaricus (Pluteolus) reticulatus. *Pers. Ic. & Desc. t. 4, f. 4-6.*

Reticula'tus = made like a net, *rete*. From the anastomosing veins on the pileus.

Pileus slightly fleshy, campanulate, then expanded, *rugoso-reticulate*, viscid; margin *striate*; stem fragile, *fibrillose*, white; gills free, ventricose, crowded, saffron yellow, to ferruginous.—*Fr. Hym. Eur.* 266. *Berk. Outl. t. 9, f. 5.* *Cooke Illus. t. 495.*

On dead wood.

Sub.-Gen. 27. GALERA. *Fr. Syst. Myc. i.* 264.

Galer'a = a cap.

Veil none, or fibrillose, stem somewhat cartilaginous, continuous with the hymenophore, tubular. Pileus more or less membranaceous, conical or oval, then expanded, *striate*, margin at first straight, pressed to the stem. Gills not decurrent.

*CONOCEPHALI. Pileus conic-campanulate, hygrophanous, nearly even, atomate when dry. Stem straight, gills ascending. Veil none.

672. Agaricus (Galera) lateritius. *Fr. Hym. Eur.* 267.

Laterit'ius = made of bricks, *lateres*; brick-red.

Pileus submembranaceous, acorn-shaped, then conical, even, hygrophanous; stem tall, fragile, straight, attenuated upwards, *frosted with white meal*; gills nearly free, linear, very narrow, tawny, ferruginous.—*Fl. Dan. t. 1846, f. 2.* *Cooke Illus. t. 460.*

In rich pastures.

673. Agaricus (Galera) tener. *Schæff. Icon. t. 70, f. 6-8.*

Tener = delicate.

Pileus submembranaceous, conico-campanulate, obtuse, hygrophanous; stem straight, fragile, *rather shining, nearly of the same colour*; gills adnate, crowded, ascending, rather broad, cinnamon.—*Fr. Hym. Eur.* 267. *Sow. t. 33.* *Bolt t. 66, f. 2.* *Cooke Illus. t. 461.*

Rich pastures, dungy ground, &c. Common.

674. Agaricus (Galera) ovalis. *Fr. Hym. Eur.* 268

Ovalis = egg-shaped, oval.

Pileus submembranaceous, oval, or campanulate, even, hygrophanous; stem straight, equal, slightly striate, nearly of the same colour; gills almost free, ventricose, very broad, ferruginous.—*Bull. t.* 552, *f.* 1. *Cooke Illus. t.* 462.

On dung.

675. Agaricus (Galera) antipus. *Lach. No.* 401.

Ant'i-pus, from ἀντί = opposite, and πούς = a foot. Because the root differs from the stem in shape.

Pileus campanulate, then convex, even, hygrophanous, when dry sprinkled with atoms, disc slightly fleshy; stem straight, short, striate, mealy; base bulbous, fusiform, rooting; gills almost free, crowded, lanceolate, yellowish ochre.—*Fr. Hym. Eur.* 268. *Cooke Illus. t.* 463 A.

On mould in flower pots.

676. Agaricus (Galera) confertus. *Bolt. Fungi t.* 18.

Confertus = pressed together, crowded. From the manner of growth.

Pileus submembranaceous, acutely conico-campanulate, smooth, hygrophanous; stem slender, silky, shining, naked; base equal, deeply rooting; gills slightly adnexed, subdistant, white, then brownish-ochraceous.—*Fr. Hym. Eur.* 268. *Cooke Illus. t.* 463 B.

In stoves. Rare.

The figure in "Illustrations" is reproduced from Bolton, as we have never seen this species.

677. Agaricus (Galera) sparteus. *Fr. Hym. Eur.* 269.

Spar'teus = made of broom; *spartum*, "esparto grass." From the rigid stem.

Pileus membranaceous, campanulate, convex, then expanded, obtuse, hygrophanous, dry, even, smooth; stem slender, rigid, flexible, smooth; gills adnate, crowded, plane, cinnamon coloured.—*Bolt. t.* 51, *f.* 1. *Cooke Illus. t.* 481 A.

Amongst moss in meadows.

678. Agaricus (Galera) pygmæo-affinis. *Fr. Hym. Eur.* 269.

Pygmæo-affi'nis = allied to *A. pygmaeus*.

Pileus submembranaceous, campanulate, then expanded, dry, without striæ, slightly corrugated, honey-yellow; stem fistulose, equal, straight, white; gills nearly free, thin, crowded, clay-

coloured, then ferruginous ochre.—*Fr. Icones. t. 128, f. 1. Cooke Illus. t. 481 B.*

In a cucumber house.

Stem 2-3 inches long, apex pruinose, gill very narrow.

** BRYOGENI. Pileus membranaceous, campanulate, striate, smooth, hygrophanous, when dry even, opaque, rather silky; stem thin, flexile; gills broad, adnate. Growing on moss.

679. Agaricus (Galera) vittæformis. *Fr. Hym. Eur. 269.*

Vittæ-formis = of the shape of a fillet or head-band, *vitta*.

Pileus membranaceous, conico-campanulate, papillate, *margin striate, bright brown*; stem equal, flexible, even; gills adnate, ascending, linear, clay-coloured, then cinnamon.—*Schæff. t. 63, f. 4-6. Cooke Illus. t. 464 A.*

Amongst moss. Nov.

Stem rubiginous, $1\frac{1}{2}$ in. long, $\frac{1}{2}$ line thick, hispid under a lens; pileus 3-5 lines high and broad, ferruginous, brown.

680. Agaricus (Galera) rubiginosus. *Pers. Syn. 385.*

Rubiginosus = full of rust, *rubigo*. From the rust-red stem.

Pileus membranaceous, campanulate, obtuse, everywhere sulcate or striate, hygrophanous; stem filiform, equal, thin, shining, smooth, rubiginous; gills adnate, ascending, distant, broad, opaque.—*Fr. Hym. Eur. 269. Mich. Gen. t. 75, f. 8. Cooke Illus. t. 464 B.*

Amongst moss. Sept.

Pileus cinnamon or honey-coloured, tan colour when dry; stem 2 in. long, flexile.

681. Agaricus (Galera) hypnorum. *Batsch. f. 96.*

Hypnorum = of mosses, *hypna*.

Pileus membranaceous, campanulate, *subpapillate*, smooth, striate, hygrophanous; stem slender, flexuose, lax, *of the same colour, apex pruinose*; gills adnate, rather distant, broad, lax, at length plane, cinnamon-yellow.—*Fr. Hym. Eur. 270. Sow. t. 282. Cooke Illus. t. 465.*

Amongst moss, Common.

var. **bryorum.** *Pers. Syn. 385.*

Bryorum = of mosses, *βρύα*.

Larger, watery cinnamon, papilla rather horny.

Amongst moss.

var. **sphagnorum**. *Pers. Syn. p.* 385.

Sphagno'rum = of mosses, σφαγνῶν.

Pileus membranaceous, campanulate, smooth, striate, yellow-ochraceous, disc broad; stem long, slender, subfibrillose, tawny, gills adnate, subdistant, broad.—*Bull. t.* 560, *f.* H.

On *Sphagnum*.

682. Agaricus (Galera) mniophilus. *Lasch. in Fries Hym. Eur.* 270.

Mnio'-philus = loving moss, μνίον.

Pileus membranaceous, campanulate, somewhat papillate, striate, tawny yellow, stem equal, flexile, yellowish, mealy at the apex, floccose at the base. gills obtusely adnate, ascending, broad, rather distant, yellowish, then ochraceous.—*Cooke Illus. t.* 466 a.

Amongst moss.

Pileus about $\frac{1}{2}$ inch. Stem 2-3 in. long, a line thick.

683. Agaricus (Galera) minutus. *Quel. Jura. III., 10, t., 1, f.* 5.

Minutus = very small.

Pileus tawny bistre, tender, campanulate (2-3 mm.), membranaceous, striate; stem almost capillary (1 cm.), smooth tawny, shining, woolly and white at the base; gills adnate arcuate, as broad as long, moderately crowded, yellowish then clay coloured, with the edge whitish.—*Cooke Illus. t.* 466 B.

On decayed wood.

* * **ERIODERMEI.** Pileus somewhat membranaceous. Veil manifest, superficial, fugitive, at first chiefly about the margin silky or squamulose.

684. Agaricus (Galera) ravidus. *Fries Hym. Eur.* 271.

Ra'vidus = greyish, dark-coloured.

Pileus rather membranaceous, campanulate then hemispherical, even and brownish grey when moist, dingy ochre when dry, somewhat silky margin, at first dentate with the appendiculate white veil, stem fistulose, fragile, fibrillose-striate, pallid, silvery grey; gills nearly free, ventricose, distant, gilvous. —*Cooke Illus. t.* 467 A.

On the ground amongst chips.

685. Agaricus (Galera) mycenopsis. *Fr. Hym. Eur.* 271.

Mycen'-opsis = like a *Mycena*.

Pileus submembranaceous, campanulate, then expanded, disc even, slightly striate to the middle, about the margin at first whitish-silky, and veiled; stem much attenuated, whitish-silky; gills adnexed, seceding, ventricose, rather distant, whitish then pale ochre.—*Cooke Illus. t.* 467 B.

In marshy ground amongst *Sphagnum*. Aug.—Oct.

Sub.-Gen. 28. TUBARIA. Smith Seem. Journ. 1870.

Tuba'ria, from *tuba* = a trumpet.

Stem subcartilaginous, fistulose. Pileus rather membranaceous, often clad with the floccose universal veil. Gills sub-decurrent, broadest behind, triangular.

* GENUINI. Spores ferruginous.

686. Agaricus (Tubaria) cupularis. Bull. Champ. t. 554, f. 2.

Cupula'ris = of the shape of a *cupa*, a cup, in late Latin.

Pileus rather fleshy, plano-depressed, obtuse, even, smooth, rufescent, then yellowish, hygrophanous; stem fistulose, naked, attenuated upwards, whitish; gills decurrent, crowded, dingy.—*Fr. Hym. Eur.* 273. *Cooke Illus. t.* 602.

On the ground.

687. Agaricus (Tubaria) furfuraceus. Pers. Syn. 454.

Furfura'ceus = like bran or scurf, *furfur*.

Pileus somewhat fleshy, convexo-plane, obtuse, then depressed, moist, hygrophanous, at first clothed with silky evanescent scales, then naked; stem fistulose, flocculose, rigid, pallid; gills adnato-decurrent, rather distant, cinnamon coloured.—*Fr. Hym. Eur.* 272. *Bull. t.* 593, f. 3. *Batsch f.* 98. *Cooke Illus. t.* 603.

On chips, &c. Common.

var. **trigonophyllus.** Lasch. No. 390.

Trigo'no-phyllus, from *τρίγωνον* = a triangle, and *φύλλον* = a leaf.

Smaller, growing pale; gills very broad, triangular, dingy ochre.—*Fr. Hym. Eur.* 273. *Cooke Illus. t.* 483.

By waysides.

688. Agaricus (Tubaria) paludosus. Fr. Hym. Eur. 273.

Paludo'sus = found in marshes, *paludes*.

Pileus submembranaceous, campanulate, then convex, acutely umbonate, hygrophanous, without striae, silky everywhere with persistent white hairs; stem fistulose, twisted, encircled with the remains of the white veil; gills adnate, plane, ovate, pale honey colour.—*Cooke Illus. t.* 484.

In marshy ground, amongst *Sphagnum*. Aug.

689. Agaricus (Tubaria) stagninus. Fr. Hym. Eur. 273.

Stagni'nus = found in stagnant waters, *stagna*.

Pileus submembranaceous, conical, then convex, obtuse, rather viscid and striate when moist, ferruginous-bay, when dry even,

subochraceous, furnished about the margin with floccose, concentric white scales; stem fistulose, rubiginous-brown; gills decurrent, very broad, ferruginous.—Cooke *Illus. t.* 468.

In marshy ground.

690. Agaricus (Tubaria) pellucidus. *Bull. Champ. t.* 550, *f.* 2.

Pellucidus = transparent.

Pileus rather membranaceous, conic then campanulate, umbonate, cinnamon, hygrophanous, about the striate margin silky and squamulose; stem thin, short, attenuated upwards, shining, pruinose at the apex; gills decurrent, very broad behind, triangular, paler.—*Fr. Hym. Eur.* 273.

Amongst leaves.

691. Agaricus (Tubaria) embolus. *Fr. Hym. Eur.* 274.

Embolus, from ἔμβολος = a wedge, from the shape of the gills.

Pileus membranaceous, campanulate, obtuse, radiato-striate, smooth, hygrophanous; stem very smooth, shining yellow, thickened upwards; gills adnate, very broad behind, triangular, thick, very distant, cinnamon.—Cooke *Illus. t.* 514 A.

Amongst heath.

692. Agaricus (Tubaria) autochthonus. *B. & Br. Ann. N. H.* (1866), No. 1121.

Autochthonus = sprung from the land itself; from αὐτός = self, and χῶν = the earth, from its growing on the naked soil.

Pileus obtuse, hemispherical, ochrey-white, silky, margin flocculose; stem slender, flexuous, incrassated above and below, whitish, woolly; gills horizontal, with a distinct adnate tooth, honey-coloured.—*Fr. Hym. Eur.* 274. *Cooke Illus. t.* 514 B.

On the naked soil.

** PHŒOTI. Spores dusky, ferruginous.

693. Agaricus (Tubaria) crobulus. *Fr. Hym. Eur.* 274.

Crobulus, from κροβύλος = a knot of hair on the crown of the head.

Pileus rather fleshy, convexo-plane, obtuse, with whitish evanescent floccose scales, then smooth; stem fistulose, brown, densely clad with whitish scales, gills adnate, decurrent, crowded, ferruginous, brown.—Cooke *Illus. t.* 496.

In a ditch amongst fragments of stieks. Oct.

Pileus slightly viscid, scarcely striate, when dry tan-coloured, rather shining.

694. Agaricus (Tubaria) inquilinus. *Fr. Hym. Eur.* 274.

Inquilinus = a tenant or lodger; a parasite.

Pileus submembranaceous, convexo-plane, *smooth*, slightly *striate*, hygrophaneous, centre somewhat fleshy; stem fistulose, short, tough, *dark brown*, attenuated downwards; gills adnato-decurrent, *triangular*, convex, scarcely crowded, *clay coloured then umber*.—*Cooke Illus. t.* 497.

On chips in woods, gardens, &c.

var. **ecbolus.** *Fries Hym. Eur.* 274.

Ec'bolus = ἐκβολος, thrown away.

Pileus clay colour, stem rooting, equal, gills *crowded*, *ferruginous*.

On grass roots.

Sub-Gen. 29. **CREPIDOTUS.** *Fr. Sys. Myc. i.* 272.

Crepido'tus, from *crepύδα*, κρηπίς, a sandal. The termination expresses affinity to *Pleurotus*.

Variable in size, irregular, without manifest veil. Pileus excentric, lateral, or resupinate. Spores ferruginous.

695. Agaricus (Crepidotus) palmatus. *Bull. Champ. t.* 216.

Palma'tus = shaped like the palm of the hand, *palma*; palmate.

Pileus fleshy, compact, convex then expanded, irregular, smooth, pelliculose, ferruginous; *stem excentric* or lateral, incurved, firm, smooth, whitish, gills *fixed to a collar*, ventricose, rather distant, of the same colour.—*Fr. Hym. Eur.* 275.

On trunks.

696. Agaricus (Crepidotus) alveolus. *Lasch. No.* 582.

Alve'olus = a small hollow or trough.

Pileus fleshy, *soft, lateral*, obovate, then repand, opaque, contracted, and tomentose-villous behind; gills determinate, crowded, broad, clay-brown.—*Fr. Hym. Eur.* 275. *Pers. M.E. t.* 24, f. 3. *Cooke Illus. t.* 499A.

On old stumps. Aug., Sept.

697. Agaricus (Crepidotus) mollis. *Schaff. Icon. t.* 213.

Mollis = soft.

Pileus between *subgelatinous* and *fleshy*, flaccid, even, smooth, becoming pale; stem obsolete; gills crowded, decurrent, *linear*, from whitish to watery cinnamon.—*Sow. t.* 98. *Bark Outl. t.* 9, f. 6. *Huss. i., t.* 74. *Price f.* 25. *Cooke Illus. t.* 498.

On old stumps. July—Oct.

- 698. Agaricus (Crepidotus) applanatus.** *Pers. Obs.* 1., p. 8, t. 5, f. 3.

Ap-plana'tus = levelled, made plane.

Pileus rather fleshy, soft, fragile, plane, reniform, or wedge-shaped, *whitish*, ending behind in a *very short white tomentose stem*; gills *determinate*, crowded, linear; whitish, then pale cinnamon.—*Fr. Hym. Eur.* 275.

On decaying wood.

- 699. Agaricus (Crepidotus) calolepis.** *Fries Hym. Eur.* 276.

Calo-lepis, from *καλός* = beautiful, and *λεπίς* = a scale.

Pileus rather fleshy, dimidiate, sessile in a villous nodule, *marginate* behind, elegantly variegated with crowded minute *rufescent scales*; gills concurrent at the base, at length dingy ferruginous.—*Cooke Illus.* t. 499 B.

On rotten branches.

- 700. Agaricus (Crepidotus) haustellaris.** *Fries Hym. Eur.* 276:

Haustella'ris = of a drawer of water. Because found by Fries on damp decaying branches of aspen (*Syst. Myc.* i., p. 274).

Pileus rather fleshy, flaccid, *exactly lateral*, reniform, even, *slightly villous*, tan colour; stem lateral, *attenuated upwards*, villous, white; gills *rounded*, nearly free, pallid, then brownish cinnamon.—*Batsch. f.* 121. *Cooke Illus.* t. 515 A.

On dead trunks.

- 701. Agaricus (Crepidotus) Phillipsii.** *B. & Br. Grevillea* vi., 101.

Phillipsi, in honour of W. Phillips, F.L.S., of Shrewsbury.

Small, somewhat umber; pileus oblique, striate, smooth; stem solid, incurved at the base; gills narrow, ventricose, shortly adnate.—*Cooke. Illus.* t. 515 C.

On grass.

Pileus about 3 lines across, Stem 1-1½ lines high, spores 5 μ long.

- 702. Agaricus (Crepidotus) Rubi.** *Berk. Outl.* p. 164, t. 9, f. 7.

Rubi = of bramble.

Pileus fleshy, clothed with very minute *crystalline meal*; stem short, incurved, solid, strigose at the base; gills *adnato-decurrent*, greyish, then umber, slightly ventricose.—*Fr. Hym. Eur.* 276. *Cooke Illus.* t. 515 B.

On dead bramble, &c. Ang.

- 703. Agaricus (Crepidotus) chimonophilus.** *B. & Br. Berk. Outl.* p. 164.

Chimonophilus, from χεῖμων = winter, and φιλος = loving. Because first found in December.

White. Pileus convex, rather thick, villous; margin reflexed; stem very short, or obsolete; gills distant, attenuated behind, few distant.—*Fr. Hym. Eur.* 276. *Cooke Illus. t.* 515 A.

On small dead branches of *Pyrus torminalis*.

- 704. Agaricus (Crepidotus) Ralszii,** *B. & Br. Ann. Nat. Hist.* (1883), p. 372, No. 2008.

Ralszii, in honour of J. Ralsfs.

Pileus semi-reflexed, yellow, delicately hispid or chaffy, margin involute, flat, fixed by cottony flocci, stem obsolete, gills ventricose, clay-coloured, margin whitish.—*Cooke Illus. t.* 516 D.

On decaying wood.

- 705. Agaricus (Crepidotus) epibryus.** *Fries Hym. Eur.* 277.

Epibryus, from ἐπί = upon, and βρύον = moss.

White. Pileus membranaceous, resupinate, sessile, adnate, by the vertex, silky then smooth; gills concurrent in the centre, thin, crowded, white then gilvous.—*Cooke Illus. t.* 516 C.

On larger mosses.

- 706. Agaricus (Crepidotus) pezizoides.** *Nees. A. N. Cur.* ix., t. 6, f. 18.

Pezizoides = like a *Peziza*.

Pileus sessile, thin, cup-shaped, then reflexed, mealy, subtomentose; gills meeting in the centre, somewhat distant, olivaceous-brown, then tawny.—*Fr. Hym. Eur.* 277. *Cooke Illus. t.* 516 D.

On rotten branches.

- 707. Agaricus (Crepidotus) epigæus.** *Pers. Syn. p.* 484. *Ag. depluens, Batsch., fig.* 122.

Epigæus, ἐπί-γαιος = upon the earth.

Pileus reniform, fragile, reddish grey; base villose, whitish; gills distinct, watery rufescent, divergent.—*Cooke Illus. t.* 516 A.

On the clay of the marlstone.

"Spores oblong, .0004 in. long, not irregular, and more or less angular, as in the plant usually referred to *A. depluens*, as figured by Hoffmann, so that its affinities seem rather to be with *Crepidotus* than *Claudopus*. The present is exactly the plant of Batsch, and we think it better to leave the name with what has formerly been considered his species, and retain that of Persoon. The gills of *A. epigæus* are no longer red when dry."—*B. & Br.*

Series 4. **Pratelli.** Fr. Epicr. p. 212.

Spores blackish-purple or purplish-brown, rarely fuscous.

Sub.-Gen. 30. **CHITONIA.** Fr. Hym. Eur. p. 277.

Chitonia = from χιτών = a coat or covering. In allusion to the veil.

Universal veil distinct from the pileus. Hymenophore distinct from the stem. Gills free.

Analogous to *Amanita* and *Tolvaria*, volva at the base of the stem, with or without a wing.

708. Agaricus (Chitonia) rubriceps. Cooke and Mass. in Grevillea xv., p. 57.

Ru'bri-ceps, from *ruber* = red, and *caput* = head.

Pileus rather fleshy, campanulate, then expanded, umbonate, smooth, even, testaceous, margin faintly striate, stem erect, fistulose, paler than the pileus, rooting, volva sheathing, saccate, whitish, torn at the margin. Gills free, lanceolate, rather crowded, purplish-brown. Spores elliptical, a little attenuated at each end, $12 \times 6 \mu$. Ring obsolete.

On soil in aroid house. Kew Gardens. Dec.

Pileus 1 in. diam. Stem 3 in. long, about two lines thick.

Sub.-Gen. 31. **PSALLIOTA.** Fr. Epicr. p. 212.

Psallio'ta, from ψάλλιον (better ψάλιον, as always in poetry) = the curb-chain, or the ring attached to it. From its analogy to *Armillaria*, in being ringed.

Spores dark, brownish-purple, dead brown or reddish-purple; veil universal, concrete with the cuticle of the pileus, and fixed to the stem, forming a ring; pileus fleshy; stem distinct from the hymenophore, furnished with a ring; gills free, and rounded behind, at first white, then pink, afterwards intense purple-brown.

HAB. All the species are terrestrial, mostly growing in rich pastures and on manured ground. *Psalliota* corresponds with *Lepiota*.

* **EDULES.** Large, fleshy.

709. Agaricus (Psalliota) augustus. Fr. Hym. Eur. 278.

Augustus = noble.

Pileus globose, then hemispherical, at length expanded, very obtuse, disc even, circumference fibrillose-squamose, stem solid, thick, smooth; ring superior, very broad, externally-cracked into

angular scales; gills crowded, narrow, pallid then brown remote, leaving a collar round the stem.—*Fr. Sver. Scamp. t. 38. Cooke Illus. t. 521.*

In woods.

A very large and fine species. Pileus 4-5 inches broad. Stem $1\frac{1}{2}$ -2 in. thick, attenuated upwards, white, but tinged with red when bruised. Flesh soft, white, unchangeable. Gills never acquiring a flesh-colour.

710. *Agaricus (Psalliota) elvensis.* *B. & Br. Ann. N.H., 1865, No. 1009.*

Elvensis, from its having been first found at Bodelwyddan, by the river Elwy, in Wales.

Cæspitose. Pileus from sub-globose to hemispherical, fibrillose, broken up into *large persistent brown scales*, areolate in the centre, margin thick, covered with pyramidal warts; stem fibrillose below, ring very large, areolato-verrucose beneath; gills free, brownish flesh colour.—*Cooke Illus. t. 522.*

Under oak trees. Sept.

711. *Agaricus (Psalliota) arvensis.* *Schæff. Icon. t. 310, 311.*

Arvensis = of or belonging to cultivated land, *arvum*.

Pileus fleshy, conico-campanulate, then expanded, at first floccoso-farinose, then nearly smooth, even, or cracked; stem hollow, with a floccose pith; ring pendulous, broad, double, the outer split in rays; gills free, broader in front, dirty white, then reddish-brown.—*Fr. Hym. Eur. 278. Cooke Illus. t. 523. Berk. Outl. t. 10, f. 4. Huss. i. t. 76, 77. Badh. i. t. 6, f. 1. A. Georgii, Sow. t. 304.*

In meadows, often in rings. Esculent.

var. *villaticus.* *Brond.*

Acquires a large size, and is very scaly.—*Cooke Illus. t. 585.*
On the ground.

var. *purpurascens.* *Cke. Illus. t. 584.*

Pileus becoming tinged with purple.

In woods, &c.

712. *Agaricus (Psalliota) pratensis.* *Schæff. Icon. t. 96.*

Pratensis = of or belonging to meadows, *prata*.

Pileus fleshy, ovoid then expanded, becoming smooth or squamulose, whitish then cinereous; *stem stuffed*, thickened at the base, naked; ring median, simple, deciduous; gills free,

narrow, acute, rounded behind, cinereous, at length brown.—*Fr. Hym. Eur.* 279. *Cooke Illus. t.* 525.

In pastures and woods.

Pileus 2-3 inches broad. Stem 2 in. long, half an inch thick and more. Odour and taste pleasant.

713. *Agaricus (Psalliota) cretaceus.* *Fr. Hym. Eur.* 279.

Cretaceus = chalky. From the appearance.

Pileus fleshy, campanulate, then convexo-plane, naked, even, at first silky, nearly smooth, or rivulose; stem hollow, equally attenuated, even, white; ring simple, reflexed, and again ascending; gills rather remote, broader in front, for a long time white.—*Berk. Outl. t.* 10, f. 5. *Cooke Illus. t.* 524.

In meadows and stoves.

714. *Agaricus (Psalliota) campestris.* *Linn.*

Campestris = of or pertaining to a level field, *campus*.

Pileus fleshy, convexo-plane, dry, silky, floccose or squamulose; stem stuffed, even, white, ring medial, somewhat torn; gills free, approximate, ventricose, sub-deliquescent, flesh-coloured, then brown.—*Fr. Hym. Eur.* 279. *Berk. Outl. t.* 10, f. 2. *Huss. i., t.* 90. *Hogg & Johnst. t.* 19. *Sow. t.* 305. *Grev. t.* 161. *Price f.* 63. *Badh. i. t.* 4, 5, ii. t. 4, f. 3-5. *Cooke Illus. t.* 526.

In rich pastures. Common. Esulent.

var. **silvicola.** *Vitt. Cooke Illus. t.* 529.

Silvicola = inhabiting woods.

Pileus smooth, shining; stem elongated, somewhat bulbous.—*Fr. Epicr. p.* 213. *Krombh. t.* 23, f. 8.

In woods.

var. **pratensis.** *Vitt.*

Pratensis = growing in meadows.

Distinguished by the small rufous scales of the pileus, and the flesh having a slight pink tinge.

In pastures.

var. **hortensis.** *Cooke Illus. t.* 527.

Hortensis = growing in gardens, *horti*.

Pileus fibrillose or squamulose, brownish. var. *elongatus*, *Gard. Chron.* 1860, p. 1061, fig. var. *Buchanani*, *Gard. Chron.* 1860, p. 1039, fig.

This is the cultivated form, which in itself is variable.

var. **vaporarius.** *Otto.*

Vapora'rius = steaming.

Pileus even, with a brown pilose coat, which also covers the stem and leaves transverse fragments thereon as it elongates.--*Krombh. t. 26, f. 14, 15. Paul. t. 132. Letell. t. 659.*

var. **costatus.** *Fr. Cooke Illus. t. 528a.*

Costa'tus = ribbed, sulcate.

Pileus sulcate, repand.

In woods.

var. **rufescens.** *Berk.*

Rufescens = becoming red.

A distinct variety, which is rufous, like *A. vaccinus*, and whose flesh turns of a bright red when bruised. The gills are at first perfectly white.—*Berk. Outl. t. 10, f. 3.*

In pastures.

var. **exannulatus.** *Cooke Illus. t. 528b.*

Ex-annula'tus = not ringed.

Ring evanescent or obsolete.

715. Agaricus (Psalliota) silvaticus. *Schæff. Icon. t. 242.*

Silva'ticus = of or belonging to woods, *silvae*.

Pileus fleshy, thin, campanulate, then expanded, gibbous, fibrillose or squamulose; ring simple, distant; stem hollow, unequal, whitish; gills free, crowded, rather thin, dry, reddish, then brown.—*Fr. Hym. Eur. 280. Cooke Illus. t. 530.*

In woods. Esculent.

716. Agaricus (Psalliota) hæmorrhoidarius. *Schulz. Kalchb. p. 29, t. 18, f. 1.*

Hæmorrhoida'rius = discharging blood.

Pileus fleshy, ovate, then expanded, rufous-brown, covered with broad adpressed scales, margin at first bent inwards, flesh when broken turning blood-red; stem soon hollow, fibrillose, solid at the base and somewhat bulbous, ring broad; gills free, approximate, crowded, rosy flesh-colour, then purplish-number.—*Fr. Hym. Eur. 281. Cooke Illus. t. 531.*

At the root of oaks. Nov. Esculent.

The whole plant turns red when bruised or cut. Pileus 4 in. across; stem 4 in. high, 1 in. thick.

717. Agaricus (Psalliota) subgibbosus. *Fr. Hym. Eur.* 281.

Sub-gibbosus = a little hump-backed or crooked.

Pileus rather fleshy, convex then plane, umbo even, smooth, but the circumference silky, fibrillose. Stem hollow, thin, ring fugacious, gills remote, white, then cinereous brown.—*Cooke Illus. t.* 532.

In woods, &c.

The form figured in Cooke's Illustrations, t. 532, is referred provisionally to this species, on the recommendation of the Rev. M. J. Berkeley. It is larger than the typical form. Pileus 2-3 inches. Stem 2-3 inches long, half an inch thick.

**** MINORES.** Pileus thinly fleshy.

718. Agaricus (Psalliota) comptulus. *Fr. Hym. Eur.* 281.

Comptulus = luxuriously decked, beautified.

Pileus rather fleshy, convex, then plane, obtuse, smooth, or with an adpressed silkiness; stem hollow, somewhat attenuated, ring medial, fugacious, white, then yellowish; gills free, crowded, broadest in front, flesh-coloured, then roseate.—*Cooke Illus. t.* 533.

In grassy places.

Stem 2 in. long, 2-3 lin. thick.

719. Agaricus (Psalliota) sagatus. *Fr. Hym. Eur.* 281.

Sagatus = clothed in thick stuff, such as is proper for mantles, *saga*. From the pelliculose pileus.

Pileus rather fleshy, convexo-plane, even, smooth, fulvous, rather shining; stem hollow, equal, ring distant, spreading; gills free, ventricose, umber.—*Cooke Illus. suppl.*

Under beech.

Stem 2 in. long, 3 lines thick. Pileus 2 in. broad. Will be figured in Appendix to Illustrations.

Sub-Gen. 32. **PILOSACE.** *Fr. Nova Symb.*, p. 9.

Pilo-sa'ce, from *πῆλος* = felt, and *σάκος* = a garment.

Hymenophore distinct from the stem. Gills free, and at first remote from the stem. Without ring or volva.

720. Agaricus (Pilcsace) Algeriensis. *Fr. Hym. Eur.* 283.

Algeriensis = Algerian. Because first found in Algeria.

Pileus fleshy, compact, smooth, convex then plane, snow-white; stem solid, stout, silky, white; gills free, narrow, dark purple.—*Cooke Illus. t.* 618.

On the ground.

Sub-Gen. 33. STROPHARIA. Fr. Monog. Hymen. i., p. 409.

Strophá'ria, from *στροφή* = a twisted band used as a sword-belt. In allusion to the ring.

Hymenophore continuous with the stem. Veil annulate, gills more or less adnate. Spores intense bright purple-brown, brown or slate-colour.

HAB. Terrestrial or epiphytal.

Stropharia corresponds with *Armillaria* and *Pholiota*.

A. VISCIPELLES. Pileus with a smooth, or squamose, often viscid pellicle.

* MUNDI. *Not growing on dung.*

721. Agaricus (Stropharia) Percevalii. *B. & Br. Ann. Nat. Hist.* No. 1767.

Percevalii. So named after Mr. Cecil H. Spencer Perceval.

Pileus slightly viscid, fleshy, umbonate, then flattened, ochraceous, here and there, chiefly about the margin, whitish floccose; flocci soon disappearing; stem *transversely squamose*, hollow above, pallid; ring narrow, more or less persistent; gills distant, affixed, broad, white, then somewhat cinereous, at length pallid.—*Grevillea* t. 126, fig. 1. *Cooke Illus.* t. 550.

On sawdust, and rotten wood.

Pileus 2 in. Stem 2.3 in., $\frac{1}{3}$ – $\frac{1}{2}$ in. thick at the base, $\frac{1}{4}$ in. above. Gills $\frac{1}{2}$ in. wide. Stem umber within.

722. Agaricus (Stropharia) versicolor. *With. Bot.* iv., p. 166.

Versi'-color = of changing colour.

Pileus fleshy, convexo-plane, squamose, *scales of the disc crowded*; stem spongy, stuffed, bulbous, whitish, then brownish, ring persistent; gills decurrent, pallid, then reddish-brown.—*Fr. Hym. Eur.* 284. *Berk. Outl.* p. 167.

On the ground.

Not found since the time of Withering.

723. Agaricus (Stropharia) æruginosus. *Curt. Fl. Lond.* t. 309.

Ærugino'sus, from *ærugo* = copper-rust, verdigris.

Pileus fleshy, convexo-plane, subumbonate, clothed with *green evanescent slime*, becoming paler; stem hollow, equal, fibrillose or squamose below the ring, tinted with blue; gills adnate, soft, brown, tinged with purple.—*Fr. Hym. Eur.* 284. *Sow. t.* 261. *Huss. i. t.* 35. *Cooke Illus.* t. 551.

In meadows, &c. Common.

724. Agaricus (Stropharia) albo-cyaneus. *Desm. Cat. p. 22.*

Albo-cyan'us, from *albus* = white, and *cyaneus* = sea-blue.

Pileus fleshy, thin, umbonate, even, viscid, *greenish, then whitish*; stem hollow, thin, flexuose, even, whitish; ring incomplete; gills attenuated, fixed, whitish flesh-colour, then brownish purple.—*Fr. Hym. Eur.* 284. *Pers. M. E. t.* 29, *f.* 2, 3. *Cooke Illus. t.* 552.

In meadows and on dung. Oct. Nov.

725. Agaricus (Psalliota) inunctus. *Fr. Hym. Eur.* 284.

Inunctus = anointed, besmeared, from its being at first glutinous.

Pileus fleshy, soft, even, smooth, subumbonate, *clad with an evanescent livid purplish gluten*, growing paler; stem soft, flexuose, white, silky fibrillose below the distant fugacious ring; gills adnate, ventricose, pale brown.—*Saund. & Sm. Illus. t.* 29. *Cooke Illus. t.* 534.

In grassy places.

var. **pallidus.** *B. & Br. Ann. Nat. Hist., No.* 1875.

Pall'idus = pale.

"A pale form occurred at Sibbertoft, which we should have been inclined to refer rather to *Ag. albocyaneus*; but the cuticle peeled off with the greatest ease, and after a heavy rain it dripped with gelatinous matter. It resembled greatly Fries's figure of *A. torpens*, var."—*B. & Br.*

726. Agaricus (Stropharia) coronillus. *Bull. Champ. t.* 597.

Coronillus, diminutive of *corona* = a crown.

Pileus fleshy, hemispherical, then flattened, convex, even, rather viscid, ochraceous, fulvous, growing pale, margin at first whitish, floccose (3.5 cm.): stem white, stuffed, then fistulose, fibrillose, attenuated downwards, base equal or bulbillose (4.5 cm. long, 3.5 mm. thick); ring adhering to the stem, median, sulcato-plicate. Flesh white. Odour somewhat of radishes. Gills crowded, sinuately adnate, whitish, then purple-violet, at length becoming blackish, edge whitish and pruinose under a lens. Spores 8-10 \times 5 μ .—*Cooke Illus. t.* 535. *Ag. melaspermus*, *Fr. Hym. Eur. p.* 285. *Fr. Icon. t.* 130, *f.* 2. *Ag. coronillus*, *Fr. Hym. Eur. p.* 285. *Ag. obturatus*, *Kalch. Icon. t.* 17, *f.* 2.

By waysides.

727. Agaricus (Stropharia) melaspermus. *Bull. Champ. t.* 540, *f.* 1.

Mel a-spermus = with black spores.

Pileus fleshy, convex then plane, somewhat depressed, soft, even, slightly viscid, soon dry, often with the cuticle broken

into patches, whitish, straw-coloured in the centre ($3\frac{1}{2}$ - $4\frac{1}{2}$ cm. diam.) Stem white, stuffed, nearly equal, silky, fibrillose, becoming smooth, striate at the apex (4-6 cm. long, 6-7 mm. thick), ring white, adhering to the stem, deciduous. Flesh of the pileus white, of the stem slightly straw-coloured. Gills crowded, ventricose, sinuately adnate, whitish, then cinereous violet, at length cinereous black. Spores ovoid, $10 \times 6 \mu$.—*Cooke Illus. t. 536. Bres. Fungi Trident. t. 61.*

In meadows, pastures, &c. Summer and autumn.

728. Agaricus (Stropharia) squamosus. *Fr. Hym. Eur. 285.*

Squamo'sus = full of scales.

Pileus fleshy, thin, convexo-plane, subviscid, sprinkled with superficial concentric scales; stem subfistulose, slender, below the distant ring villosa-squamose; gills adnate, crowded, blackish, with a whitish edge.—*Berk. Outl. t. 10, f. 6. Cooke Illus. t. 553.*

In woods.

var. **thraustus.** *Kalch. Icon. t. 15, f. 4.*

Thraustus, *θραυστός*, broken.

More graceful and slender than the typical form. Squamules of the pileus deciduous.—*Cooke Illus. t. 554. A. distans, Flor. Danica t. 2077, f. 2.*

Amongst grass.

form. **aurantiacus.** *Cooke Illus. t. 555.*

Auranti'acus = orange.

Pileus orange or brick red.

Amongst grass.

729. Agaricus (Stropharia) Worthingtoni. *Fr. in Journ. Bot. (1873) p. 204.*

Worthington'i, in honour of Mr. Worthington G. Smith.

Pileus slightly fleshy, campanulate, then convex, viscid (?), even, golden yellow; stem fistulose, slender, sub-flexuose, turquoise-blue; gills adnate, ferruginous brown.—*Fr. Hym. Eur. 286. Cooke Illus. t. 556. A. (Stropharia) albo-cyaneus, Saund. & Sm. Myc. Ill. t. 29, f. 1-5 (not Desm.)*

Pastures. Dec.

Differing from *Ag. albo-cyaneus*, in which the stem is soft, hollow, 3-4 lines thick, and shorter; pileus fleshy, convex, then plane, milky-white, then becoming verdigris-green; gills whitish, then brownish. Spores $7 \times 4 \mu$.

*** MERDARI. Ring often incomplete.

730. Agaricus (Stropharia) luteo-nitens. *Fr. Hym. Eur.* 286.

Lut'eo-ni'tens, from *luteus* = yellow, and *nitens* = shining.

Pileus fleshy, thin, conical, campanulate, umbonate, viscid, yellow, margin squamulose, stem hollow, even, pruinose above the distant ring, gills adnexed, ventricose, cinereous, becoming blackish.—*Flora Danica* t. 1067. *Cooke Illus.* t. 604.

On sawdust, dung, and humus.

Pileus 1-2 in. Stem 2 in. long, 2 lines thick.

731. Agaricus (Psalliota) merdarius. *Fr. Hym. Eur.* 286.

Merda'rius, from *merda* = dung. Because it grows on dry dung. (Fries, l.c.)

Pileus convex, then plane, obtuse. smooth, moist, hygrophanous; stem hollow, tough, short, flocculose, pallid when dry; ring torn, fugacious; gills adnate, broad, yellowish, then umber. —*Saund. & Sm. Illus. pl.* 25. *Cooke Illus.* t. 537.

In a grass field.

Densely gregarious. Pileus $\frac{1}{2}$ -1 in. diam. Stem $\frac{1}{2}$ -1 inch high.

732. Agaricus (Stropharia) stercorarius. *Fr. Hym. Eur.* 287.

Stercora'rius, from *stercus* = dung. From its habitat.

Pileus rather fleshy, hemispherical, then expanded, even, smooth, discoid; stem stuffed, elongated, at first flocculose below the distant ring, with a distinct pith, subviscid; gills adnate, broad, white, umber, then olive-black.—*Bull.* t. 566, f. 4. *Cooke Illus.* t. 538.

On dung.

733. Agaricus (Stropharia) semiglobatus. *Batsch. Elen. f.* 110.

Semi-globa'tus = hemi-spherical.

Pileus somewhat fleshy, hemispherical, even; stem fistulose, slender, straight, smooth, glutinous, yellowish; veil abrupt; gills adnate, broad, plane, clouded with black.—*Fr. Hym. Eur.* 287. *Grev.* t. 344. *Huss.* i. t. 39. *Cooke Illus.* t. 539.

On dung. Common. Reputed poisonous.

B. SPINTRIGERI. Pileus without pellicle, but innately fibrillose, not viscid.

734. Agaricus (Stropharia) caput-medusæ. *Fr. Hym. Eur.* 288.

Caput medusa = Medusa's head. From the scales on the pileus.

Pileus fleshy, fragile, ovate then expanded, lacunose, squamulose, discoid; stem hollow above, squamose with imbricate scales

below the ring ; gills adfixed, ventricose, clay coloured then pallid umber.—*Cooke Illus. t. 540.*

In pine woods.

Stem 2-3 in. long, $\frac{1}{2}$ in. thick, solid at the base, whitish, ring resembling that of *A. procerus*, but persistent ; pileus umber at the top, tan-coloured at the circumference.

735. Agaricus (Stropharia) scobinaceus. *Fr. Hym. Eur.* 288.

Scobina'ceus, from *scobina* = a rasp. From the rough pileus.

Pileus fleshy, thin, hemispherical then expanded, *gibbous*, *finely sulcate*, clad with squamules, crowded, adpressed, deciduous, becoming blackish, stem hollow, fibrillose, white, mealy at the apex, ring fugacious ; gills adnate, crowded, crenulate, white then rufescent, at length purplish.

On ask trunks. Sub-cæspitose.

Pileus at first fuscous, then greyish violet towards the margin, centre livid, becoming yellowish.

736. Agaricus (Stropharia) Jerdoni. *B. & Br. Ann. N.H. No.* 913, *t. 14, f. 2.*

Jerdoni, in honour of Archibald Jerdon.

Pileus campanulate, obtuse, umbonate, fleshy, ochraceous, dry, adorned with superficial *white evanescent scales*, cuticle not separating, stem silky or squamulose, hollow ; ring superior ; gills pallid, then brown, transversely striate.—*Fr. Hym. Eur.* 289. *Cooke Illus. t. 541.*

On fir stumps. Nov.

737. Agaricus (Stropharia) spintrigex. *Fr. Hym. Eur.* 289.

Spin'tri-ger = bearing a bracelet, *spinter*. From the ring.

Pileus rather fleshy, ovate then flattened, obtuse, *even*, *smooth* ; stem hollow, equal, floccosely fibrillose, white, naked at the apex, distant ring thin, fugacious ; gills adnate, crowded, fuscous brown.—*Cooke Illus. t. 542.*

On trunks.

Cæspitose. Stem 3 in. long, 3 lines thick. Pileus fragile, 3-4 in. broad, tawny or flesh-coloured, becoming whitish.

738. Agaricus (Stropharia) hypsipus. *Fr. Hym. Eur.* 290.

Hypsi-pus, ὑψίπους, high-footed. From the long stem.

Pileus convex, then plane, *even*, *smooth*, *hygrophanous* ; stem hollow, equal, *smooth*, ring medial, persistent, gills adnate, seceding,

rather distant, white, then brown.—*Fr. Icon. t. 132, f. 2. Cooke Illus. t. 619.*

Solitary in swampy places.

Fragile. Stem 3-4 in. long, 2-3 lines thick. Pileus 2 in. broad, striate at the margin, tan-coloured or pallid when dry.

Sub-Gen. 34. HYPHOLOMA. Fr. S. M. i., p. 287.

Hypholo'ma, from $\upsilon\varphi\eta$ = a web, and $\lambda\omega\mu\alpha$ = a fringe.

Hymenophore continuous with the stem, veil interwoven in a web, adhering in fragments to the margin of the pileus. Gills adnate or sinuate. Spores brownish-purple, sometimes intense purple, almost black.

HAB. Generally stumps.

Most of the species are gregarious and not edible. *Hypholoma* corresponds to *Tricholoma*, *Entoloma*, and *Hebeloma*.

* FASCICULARES. Pileus tough, smooth, bright coloured when dry, not hygrophanous.

739. Agaricus (Hypholoma) silaceus. *Pers. Syn. p. 421.*

Sila'ceus = like ochre, *sil*.

Pileus fleshy, convex, viscid, orange-red, silky about the margin, whitish, stem stuffed, then hollow, *bulbous*, shining, fibrilloso-striate, gills adnate, crowded, grey, then olive.—*Fr. Hym. Eur. 290.*

On the ground. Glamis.

Pileus viscid, bright orange rufous; stem 4 in. high, at length hollow, solid and slightly swollen at the base; smell resembling that of meal. Spores pale purple-brown.

740. Agaricus (Hypholoma) sublateritius. *Fr. Hym. Eur. 290.*

Sub-laterit'ius = almost the colour of a brick, *later*.

Pileus fleshy, convexo-plane, obtuse, *discoid*, dry, at length smooth; *flesh compact, whitish*; stem stuffed, fibrillose, attenuated downwards, ferruginous; gills adnate, crowded, white, then dingy-olive.—*Huss. i. t. 60. Cooke Illus. t. 557.*

On old stumps. Common.

var. **squamosus.** *Cooke Illus. t. 558.*

Squamo'sus = scaly.

Pileus spotted with superficial scales, especially towards the margin.

On trunks.

var. **Schæfferi**. *Fries. Schæff. Icon. t. 49, f. 4, 5.*

Schæfferi, in honour of J. C. Schæffer.

Pileus conical, at length depressed, wrinkled; gills narrow, decurrent, even in the youngest specimens.—*B. & Br. Ann. Nat. Hist. No. 1768.*

On trunks.

741. Agaricus (Hypholoma) capnoides. *Fr. Hym. Eur. 291.*

Capno-ides = like smoke, καπνός. From the colour of the gills.

Pileus fleshy, convexo-plane, obtuse, dry, very smooth; flesh thin, white; stem nearly hollow, equal, even, silky, pallid; gills adnate, scarcely crowded, broad, dry, *smoky-grey then purplish*.—*Cooke Illus. t. 559.*

In fir woods. April.

742. Agaricus (Hypholoma) epixanthus. *Fr. Hym. Eur. 291.*

Epi-xanthus, ἐπιξανθός, yellowish brown.

Pileus fleshy, thin, convexo-plane, somewhat gibbous, even, *silky, at length smooth, flesh yellow*; stem hollow, subequal, floccoso-fibrillose, whitish, pruinose at the apex, brownish at the base; gills adnate, crowded, *whitish-yellow, at length cinereous*.—*Cooke Illus. t. 560.*

On old fir stumps.

743. Agaricus (Hypholoma) fascicularis. *Hudson Fl. Angl.*

Fascicularis = in little bundles. From its gregarious habit.

Pileus fleshy, thin, subumbonate, smooth; stem hollow, thin, fibrillose, flexuose, *flesh yellow*; gills adnate, much crowded, linear, subdeliquescent, *sulphur-coloured, then greenish*.—*Fr. Hym. Eur. 222. Bolt. t. 29. Sow. t. 225. Berk. Outl. t. 11, f. 1. Huss. ii. t. 15. Cooke Illus. t. 561.*

On old stumps, &c. Common. Dangerous.

var. **elæodes**. *Fr. Hym. Eur. 291.*

Elæo-ides = like an olive, ἔλαιος.

Pileus fleshy, somewhat plane, subumbonate, *dry, smooth, flesh yellow, stem stuffed, then hollow, equal, fibrillose, becoming ferruginous, gills adnate, crowded, thin, greenish then olive*.—*Cooke Illus. t. 562.*

On trunks, &c.

744. Agaricus (Hypholoma) dispersus. *Fr. Hym. Eur. 292.*

Dispersus = scattered. Because it is not gregarious.

Pileus somewhat fleshy, campanulate, then expanded, obtuse, even, margin silky from the veil; stem subfistulose, thin, tough,

fibrillose or silky, base brownish; gills adnate, thin, *subventricose*, crowded, pallid straw-colour, then clouded.—Cooke *Illus. t.* 586.

On stumps, and on the ground, in pine woods.

** VISCIDI. Pileus, naked, viscid.

745. Agaricus (Hypholoma) œdipus. Cooke, *Grevillea* XIV., p. 1.

Æ'dipus = οἰδίπους, with swollen foot.

Pileus glutinous, fleshy in the centre, membranaceous at the margin, at first turbinate or hemispherical, with a ragged margin (which separates from the inferior, very visible, and slightly darker evanescent ring), then convex, with an even margin, smooth, dull, hygrophanous, disc umber, becoming pallid at the margin, which extends slightly beyond the gills. Stem rather thick, enlarging downwards to a bulbous base, solid, fibrillose below, pruinose above the median ring. Gills at first whitish, becoming umber, adnate by their entire breadth, sometimes with a minute decurrent tooth, plane, with a somewhat granular margin. Spores dark brown.—Cooke *Illus. t.* 587a.

Attached to decayed sticks or dead leaves.

Pileus $\frac{1}{2}$ to 1 inch diam. Stem 2 inches long, 2-3 lines thick, nearly white.

** VELUTINI. Pileus silky, or virgate with innate fibrils.

746. Agaricus (Hypholoma) storea. *Fr. Hym. Eur.* 293.

Stor'ea = a mat. From the fibrillose texture of the pileus.

Pileus fleshy, convexo-plano, umbonate, dry, fibrillose, stem solid, elongated, equal, even, subfibrillose, pallid, gills adnate, dry, livid, becoming brownish, margin serrulate and white.

At the base of beech trees.

Stem 4.5 in. long, 4 lin. thick, pileus 3 in. broad.

var. *cæspitosus*. Cooke *Illus. t.* 543.

Cæspito'sus, from *cæspes* = a clump or group of plants; *cæspitose* in habit.

Cæspitose. Stem fistulose, sometimes tinged with yellow at the base. *Ag. hypoxantha*, Plow. and Phil., *Grevillea* xiii., 48.

On beech stumps.

It has been suggested that this variety is the true *Ag. lacrymabundus*, Fries, with which opinion we do not agree.

747. Agaricus (Hypholoma) lacrymabundus. *Fr. Hym. Eur.* 293.

Lacrymabundus = tearful. From the weeping gills.

Pileus fleshy, campanulate, then convex, *spotted with innate pilose scales*; flesh white; stem hollow, fibrilloso-squamose, rather thickened at the base, *white*; gills adnate, seceding, white, then brown purple.—*Cooke Illus. t.* 566.

On trunks and on the ground.

748. Agaricus (Hypholoma) velutinus. *Pers. Syn. p.* 409.

Velutinus = velvety.

Pileus rather fleshy, ovate, then expanded, gibbous, *fibrillose or velvety*, becoming smooth, *hygrophanous*, flesh yellowish; stem hollow, equal, fibrilloso-striate, mealy above, yellowish; gills truncato-adnexed, ventricose, scarcely crowded, brown, then umber, studded with drops of moisture.—*Fr. Hym. Eur.* 293. *Berk. Outl. t.* 11, *f.* 2. *Cooke Illus. t.* 563.

On stumps. Common.

var. β . **leiocephalus.** *B. & Br. Ann. N.H.* 1865, No. 1009.*

Pileus hygrophanous, rugged, smooth, except at the margin, where it is fibrillose, pallid, as in the stem, whose apex is farinose.

On old stumps. Sept.

749. Agaricus (Hypholoma) pyrotrichus. *Holms. Ot. II., t.* 35.

Pyro-trichus, from $\pi\hat{\nu}\rho$ = fire, and $\theta\rho\acute{\iota}\zeta$ = hair. From the colour of the fibrils on the pileus.

Pileus rather fleshy, conical, then hemispherical, obtuse, densely clad with somewhat adpressed, sometimes fascienately squamose *fulvous fibrils, fiery-tawny, flesh and veil fulvous*, stem hollow, fibrillose, becoming fulvous: gills adnate, pallid, then brownish.—*Fr. Hym. Eur.* 293. *Cooke Illus. t.* 564.

About the trunks of trees.

** FLOCCULOSI. Pileus clad with floccose superficial evanescent scales.

750. Agaricus (Hypholoma) cascus. *Fr. Hym. Eur.* 294.

Cascus = old, as if hoary.

Pileus somewhat fleshy, oval, then expanded, soft, *becoming smooth, rugulose, growing pale*; disc obtuse, even; stem hollow, equal, fibrillose, white, somewhat pruinose; gills rounded, adnexed, ventricose, dry, grey then dark brown.—*Cooke Illus. t.* 544.

In grassy places.

Gregarious. Stem 3-4 in. long, 2-3 lines thick; pileus $1\frac{1}{2}$ -2 $\frac{1}{2}$ in. broad; gills 4 lines broad; margin becoming whitish.

751. Agaricus (Hypholoma) punctulatus. *Kalch. Icon. t. 14, f. 1.*

Punctulatus = full of little points or spots.

Pileus fleshy, thin, convex, dry, pallid, *squamulose-punctate* from the veil, then naked; *stem stuffed*, pallid, clad with punctiform squamules up to the ring; gills sinuately adnate, with a decurrent tooth, broad, rather crowded, pallid, then pale umber.—*Fr. Hym. Eur. p. 289. Cooke Illus. t. 587b.*

On chips, &c.

Stem 1-2 in. long. In accord with the Rev. M. J. Berkeley we have placed this species in *Hypholoma* in preference to *Stropharia*.

*** APPENDICULATI. Pileus smooth, hygrophanous.

752. Agaricus (Hypholoma) lanaripes. *Cooke Seem. Journ. (1863), p. 66, t. 3, f. 2.*

Lanar'i-pes = with the foot (or stem) bearing wool, *lanāris*.

Pileus somewhat fleshy, campanulate, then expanded, hygrophanous, *squamosa*, with superficial scales arising from the *breaking up* of the cuticle, *pallid*; veil attached in fugacious patches; stem hollow, fragile, subfibrillose, white, tomentose at the base; gills crowded, reaching the stem, whitish, then purplish brown.—*Cooke Illus. 545. Fr. Hym. Eur. 295.*

On the soil in conservatories.

753. Agaricus (Hypholoma) Candollianus. *Fr. Hym. Eur. 295.*

Candollia'nus = in honour of A. De Candolle.

On dead stumps. Common.

Pileus somewhat fleshy, campanulate or convex, then expanded, obtuse, smooth, hygrophanous; stem hollow, fragile, *subfibrillose*, white, apex striate; gills rounded behind, adnexed, crowded, *violet*, then brownish cinnamon.—*Cooke Illus. t. 546.*

On dead stumps.

754. Agaricus (Hypholoma) appendiculatus. *Bull. Champ. t. 392.*

Appendiculatus = furnished with a small appendage, *appendiculā*. From the cortina adhering to the margin of the pileus.

Pileus between fleshy and membranaceous, ovate, then expanded; when dry rugose, and sprinkled with atoms; stem fistulose, equal, *smooth*, white, pruinose above; gills subadnate, crowded, dry, *whitish*, then rosy brown.—*Fr. Hym. Eur. 295. Sow. t. 324. Berk. Outl. t. 11, f. 3-4. Cooke Illus. t. 547.*

755. Agaricus (Hypholoma) leucotephrus. B. & Br. Ann. N.H. No. 1256.

Leuco-tephrus = the colour of white ashes ; from λευκός = white, and τεφρός = ash-coloured.

Cæspitose. Pileus at first pallid, subcampanulate, *rugose*, then convex, expanded, whitish ; stem *silky-fibrillose* below, apex striate, or between sulcate and striate, fistulose ; ring broad, here and there appendiculate ; gills narrow, at first cinereous white, slightly *adnate*, then grey, nearly black.—Fr. *Hym. Eur.* 296. *Cooke Illus. t.* 548.

In large masses at the base of ash trees. Oct.

Pileus 3 in. across ; stem 4 in. high, 5 lines thick ; gills $1\frac{1}{2}$ line broad ; spores $7\ \mu$ long, $4\ \mu$ wide, very dark brown purple. Clearly different from *A. Candollianus* and *A. appendiculatus*, Fr. The pileus is not of a rich brown when young, nor are the gills when old at all brown.—B. & Br.

756. Agaricus (Hypholoma) egenulus. Berk. Ann. N.H. No. 915.

Egénulus = needy, poor.

Solitary. Pileus hemispherical, then expanded, even, rather shining, whitish, then snowy-white, umbonate, appendiculate ; stem minutely *adpresso-squamulose*, fistulose ; gills adnate with a tooth, purplish-umber.—Fr. *Hym. Eur.* 296. *Cooke Illus.* 605A.

On the ground, amongst grass. May.

[**Agaricus pilulæformis.** Bull. Champ. t. 112. Fr. *Hym. Eur.* 296. Doubtless only an abnormal condition, and not a good species.]

757. Agaricus (Hypholoma) hydrophilus. Bull. Champ. t. 511.

Hydrophilus = loving water, ἡδωρ ; hygrophonous.

Pileus fleshy-membranaceous, convex, then expanded, subrepand, smooth, hygrophonous, *rugose*, bay-brown, disc even, margin rather broken ; stem fistulose, curved, closely fibrillose, growing pale ; gills adnexed, ventricose, crowded, dripping, pallid, then brownish-cinnamon or bay.—Fr. *Hym. Eur.* 333. *Cooke Illus. t.* 605B.

About trunks, &c.

Sub-Gen. 35. PSILOCYBE. Fr. S. M. i., p. 289.

Psilo'cybe, from ψιλος = naked, and κεφαλή = the head.

Veil not manifest, at least not interwoven. Stem rather cartilaginous, rigid or tough, tubular, hollow or stuffed, often rooting. Pileus more or less fleshy, smooth ; margin at first incurved ; gills becoming brownish or purplish.

Spores purple, purple-brown, or slate-colour.

HAB. All grow on the ground.

The species are almost all gregarious, cæspitose, inodorous, with fugitive colouring, and not edible. *Psilocybe* corresponds with *Collybia*, *Leptonia*, and *Naucoria*.

A. TENACES. Veil accidental, rarely conspicuous; stem hard, flexible, often coloured; pileus pelliculose, often rather viscid when moist, growing pale.

* *Gills ventricose, not decurrent.*

758. Agaricus (Psilocybe) sarcocephalus. *Fr. Hym. Eur.* 297.

Sarco-ceph'alus, from *σαρξ* = flesh, and *κεφαλή* = the head. From the fleshy pileus.

Pileus fleshy, compact, convex then expanded, obtuse, even, dry, pallid ferruginous; stem robust, stuffed then hollow, whitish, clad with *white meal at the apex*; gills adnate, very broad, not crowded, cinereous flesh colour, then *sooty* from the dark spores.—*Cooke Illus. t.* 567 and 620.

In grassy places, mostly about stumps.

759. Agaricus (Psilocybe) ericæus. *Pers. Syn. p.* 413.

Ericæus, from *erica* = heath; growing on heaths.

Pileus fleshy, tough, conical, then convex, at length plane, even, smooth, rather *viscid when moist*, shining when dry; stem somewhat hollow, elongated, tough, pallid; gills adnate, broad, plane, pallid, then *black*.—*Fr. Hym. Eur.* 298. *Cooke Illus. t.* 568.

In exposed pastures, after rain.

760. Agaricus (Psilocybe) subericæus. *Fr. Icon. No.* 367, *t.* 136, *f.* 2.

Sub-ericæus = rather like *Ag. ericæus*.

Pileus rather fleshy, convex, then plane, even, smooth, *tawny*; stem fistulose, smooth, becoming yellowish, gill sinuate, adnexed, broad, pallid, then blackish.—*Ag. clivularum, Letell. t.* 676. *Cooke Illus. t.* 588.

In fields.

Stem $1\frac{1}{2}$ -2 in. Pileus 2 in. broad or more.

761. Agaricus (Psilocybe) udus. *Pers. Syn. p.* 414.

Udus = damp. From its habitat.

Pileus fleshy, thin, convexo-plane, *dry, rugulose*, growing pale; stem elongated, thin, tough, fibrillose, *ferruginous below*, gills affixed, ventricose, lax, whitish, then becoming *purplish*.—*Fr. Hym. Eur. p.* 298. *Cooke Illus. t.* 569.

In marshy places.

762. Agaricus (Psilocybe) canofaciens. (*Cooke, Grevillea XIV., p.* 1.

Cano-fac'iens = making hoary, *canus*.

Gregarious. Pileus campanulate, then expanded, scarcely umbonate, but with a fleshy disc, even, *uark bay brown*, ferruginous

at the apex, clad everywhere, as well as the stem, with delicate scattered white hairs, which are soon evanescent at the apex; veil white, fibrillose, at first attached to the margin of the pileus. Stem of the same colour as the pileus, nearly equal, stuffed, *very dark at the base*; flesh of the pileus pallid, of the stem rufescent, gradually darker downwards. Gills very broad, adnate, ventricose, dark umber.—*Ag. areolatus*, *Smith in Mus. Britt. Cooke Illus. t. 621.*

On rotten straw.

Pileus about $1\frac{1}{2}$ inch diam. Stem 3 inches long, 3.4 lines thick. Spores elliptical, irregular in size, $.012-.017 \times .008$ mm.

763. *Agaricus (Psilocybe) areolatus.* Klotsch. Berk. Outl. p. 172, No. 336.

Areola'tus = with little spaces, *areæ*; covered with patches.

Pileus somewhat fleshy, convex, clothed with minute fibrils; cuticle *cracking into nearly square patches*; stem fistulose, fibrillose, dirty white; gills adnate, umber, at length black; edge white.—*Fr. Hym. Eur. 298. Cooke Illus. t. 570.*

In gardens. May—Oct.

“Densely cæspitose. Pileus at first white, with the cuticle entire, at length rufous and cracking into areolæ, a much firmer plant than *A. spadicæus*, not brittle. Stem strate, pulverulent, especially towards the apex, hollow; gills with a distinct white edge, at first very pale, spores very dark, almost black, broadly almond-shape.”—W. G. S.

764. *Agaricus (Psilocybe) agrarius.* Fr. Hym. Eur. 299.

Agrarius = of or pertaining to land, *ager*. Because found in Sweden in clayey fields, in *agris argillaceis* (Fries, l.c.).

Pileus conical-convex, then expanded, whitish, then becoming cinereous, *not hygrophanous*, subumbonate, between sulcate and striate; flesh white; stem flexuous, fistulose, white; gills rather distant, somewhat broad, briefly adnate or adnexed, white, then cinereous.—*Cooke Illus. t. 622.*

About the roots of decayed trees. Oct.

765. *Agaricus (Psilocybe) chondrodermus.* B. & Br. Ann. N.H. No. 1538.

Chondro-dermus, from *χόνδρος* = cartilage, and *δέρμα* = skin.

Pileus campanulate, fleshy, except the appendiculate margin, quite smooth, even, bright brown, *here and there cracked*; stem nearly equal, fistulose, paler, squamulose at the base; gills ventricose, affixed, seceding; *margin white*.—*Cooke Illus. t. 606 A.*

In pine woods.

Pileus 1 in. across; stem $2\frac{1}{2}$ lines thick, above 3 at the base; spores $.00025$ in. long, half as much wide, purple-black, almost oblong; pileus stains the paper yellow.

- 766. Agaricus (Psilocybe) scobicola.** *B. & Br. Ann. N.H. No.* 1769.

Scobi'cola = living among sawdust, *scōbis*.

Pileus convex, umbilicate, white, smooth; stem fibrillose, nearly equal, or dilated at the apex, fistulose; gills broad, adnexed.—*Cooke Illus. t. 607.*

On sawdust.

*** Gills plane, very broad behind, sub-decurrent.*

- 767. Agaricus (Psilocybe) ammophilus.** *Mont. Fl. Alg. t. 31.*

Ammo'philus = loving sand, *ἄμμος*.

Pileus rather fleshy, hemispherical then umbonate, stem at length soft, hollow, *immersed* up to the middle in sand, *base clavate*, gills with a somewhat decurrent tooth, smoky, powdered with the blackish spores.—*Fr. Hym. Eur. 299. Cooke Illus. t. 606 B.*

In sand.

- 768. Agaricus (Psilocybe) coprophilus.** *Bull. Champ. t. 566, f. 3.*

Copro'philus = fond of dung, *κόπρος*.

Pileus somewhat fleshy, hemispherical, then expanded, umbonate, even; stem subfistulose, attenuated above, pruinose, *becoming smooth*; gills *arcuate, sub-decurrent*, broad, livid-brown.—*Fr. Hym. Eur. 299. Cooke Illus. t. 608 A.*

On dung. Rare.

- 769. Agaricus (Psilocybe) bullaceus.** *Bull. Champ. t. 566, f. 2.*

Bulla'ceus = with a swelling or boss, *bulla*. From the umbo.

Pileus somewhat fleshy, hemispherical, then expanded, smooth, at length umbonate, *striate to the middle*; stem fistulose, short, equal, *fibrillose*; gills *adnate, triangular, plane, crowded*, ferruginous-brown.—*Fr. Hym. Eur. 299. Cooke Illus. t. 608 B.*

On horse dung.

- 770. Agaricus (Psilocybe) physaloides.** *Bull. Champ. t. 366, f. 1.*

Physalo-i'des = like a bladder, *φυσάλις*.

Pileus somewhat fleshy, campanulate, then expanded, *even*, rather viscid; stem fistulose, flexile, closely fibrillose, bright brown at the base; gills *decurrent, crowded, sub-ferruginous*.—*Fr. Hym. Eur. 300. Cooke Illus. t. 609 A.*

On dung, in mossy places, &c.

- 771. Agaricus (Psilocybe) nucisedus.** *Fr. Hym. Eur. p. 300.*

Nuci'sedus, from *nux* = a nut, and *sedeo* = I sit. From its growing in nuts of beech and hazel (*Fries, l.c.*)

Pileus rather fleshy, convex, obsoletely umbonate, even, *silky*

when dry; stem fistulose, pallid, *attenuated upwards*, brownish, downy; gills adnate, broad, plane, brown then dark umber.—*Cooke Illus. t. 609 B.*

Amongst small chips in a wood.

Stem slender, 1-2 in. long; apex sometimes pruinose; pileus yellowish.

772. Agaricus (Psilocybe) atrorufus. *Schæff. t. 234.*

Atro-ru'fus = black-red. From the colour of the pileus.

Pileus rather fleshy, hemispherical, convex, *obtuse, smooth, slightly striate at the margin*, discoloured when dry, even; stem hollow, thin, equal, pallid bay; gills rather decurrent, broad, plane, umber.—*Fr. Hym. Eur. p. 300. Cooke Illus. t. 571.*

On the ground in woods.

* * * *Gills almost linear, ascending.*

773. Agaricus (Psilocybe) comptus. *B. & Br. Ann. N.H. No. 917, t. 14, f. 4.*

Comptus = ornamented.

Pileus between conic and campanulate, at length expanded, pallid, then pallid ochraceous, *striate*, having scattered shining spots; margin sub-crenulate; stem flexuose, shining, silky, smooth; gills distant, ventricose, adnate, and *rosy-umber*.—*Fr. Hym. Eur. p. 300. Cooke Illus. t. 589 A.*

In woods, amongst grass. Oct.

774. Agaricus (Psilocybe) semilanceatus. *Fr. Hym. Eur. p. 300.*

Semi-lancea'tus = almost the shape of a lance, *lancea*.

Pileus submembranaceous, acutely conical, *almost cuspidate*, viscid when moist, *slightly striate*; stem medullate, tough, flexuose, smooth, pallid; gills adnexed, ascending, purple-black.—*Sow. t. 240, f. 1-3. Cooke Illus. t. 572.*

In rich pastures. Common. Poisonous.

var. *cærulescens.* *Cooke. Illus. t. 573.*

Cærulescens = becoming blue.

Base of stem turning indigo-blue.

In pastures. Poisonous.

** RIGID. Veil none. Stem rigid. Pileus scarcely pelliculose, but flesh easily cut, hygrophaneous. Gills adnexed, very rarely adnate.

775. Agaricus (Psilocybe) spadiceus. *Schæff. Icon. t. 60, f. 6.*

Spadi'ceus = date-brown.

Rigid; pileus fleshy, convexo-plane, obtuse, *even, moist, hygrophaneous*; stem hollow, tough, pallid, apex even; gills rounded

behind, adnexed, dry, crowded, whitish, then *rosy*-brown.—*Fr. Hym. Eur.* 302. *Cooke Illus.* 610.

On dead stumps, ground, &c., in woods. Common.

var. A. **hygrophilus**. *Fr. Hym. Eur.* 302.

Hygrophilus = loving moisture; ὑγρός = moist.

Pileus tawny, then clay-colour; stem 4-6 inches long, rather fusiform, rooting; gills emarginate, with a deeply decurrent line; at length umber-brown.

At the roots of ash.

var. B. **polycephalus**. *Fr.*

Densely crowded, stem thinner, flexuous, gills nearly free, at length tawny umber.

About trunks.

776. Agaricus (Psilocybe) cernuus. *Müll. in Fl. Dan. t.* 1008.

Cernuus = stooping, nodding.

Pileus somewhat fleshy, campanulate, convex, then expanded, smooth, hygrophanous, wrinkled when dry; stem fistulose, flexuose, smooth, white, apex even, pruinose; gills *adnate*, subventricose, scarcely crowded, *whitish-cinereous*, then brownish-black.—*Fr. Hym. Eur. p.* 303. *Cooke Illus. t.* 574.

On chips, decayed wood, &c. Dec.

777. Agaricus (Psilocybe) hebes. *Pers. Myc. Fur. III., t.* 28, *f.* 5.

Hebes = blunt; obtuse.

Pileus rather fleshy, convex, then expanded, obtuse, smooth, hygrophanous, margin finely striate, stem fistulose, smooth, equal, becoming pallid; gills *adnate*, *triangular*, crowded, whitish-tawny.—*Fr. Hym. Eur.* 303. *Cooke Illus. t.* 589 B.

On trunks, leaves, &c.

778. Agaricus (Psilocybe) fœniseccii. *Pers. Ic. & Des. t.* 11, *f.* 1.

Fœniseccii, from *fœnum* = hay, and *sēco* = I cut. From its occurring on garden lawns.

Pileus somewhat fleshy, campanulate, then expanded, obtuse, dry, becoming dry; stem fistulose, not rooting, *pallid-rufous*, even, *smooth*; gills *adnate*, *ventricose* (as if broadly emarginate), scarcely crowded, brownish umber.—*Berk. Outl. t.* 11, *f.* 5. *Huss i., t.* 39. *Fr. Hym. Eur. p.* 303. *Cooke Illus. t.* 590.

Amongst grass in fields and gardens.

779. Agaricus (Psilocybe) clivensis, *B. & Br. Ann. N.H. No.* 916, *t.* XIV., *f.* 3.

Clivensis, because discovered at King's Cliffe, in Northamptonshire.

Pileus subhemispherical, pallid brown, then whitish ochre, even

atomate, margin striate; stem equal, *somewhat silky* below; gills adnate, broadly emarginate, horizontal, *umber*.—*Fr. Hym. Eur. p. 303. Cooke Illus. suppl.*

On the ground. Oct.

Sub-Gen. 36. PSATHYRA. Fr. Epicr. p. 231.

Psath'ya, from ψαθρός = friable, falling to pieces.

Veil none, or only universal, floccose-fibrillose. Stem rather cartilaginous, fistulose, polished, fragile. Pileus conical or campanulate, membranaceous. Margin at first straight, adpressed to the stem. Gills purplish or brownish. Slender, fragile, hygrophanous.

Spores dark purple-brown, approaching slate-colour.

HAB. On the ground or rotten wood.

All are slender and hygrophanous, with fugitive colouring, and closely allied to the *fragile* species of the last sub-genus. *Psathyra* agrees with *Mycena*, *Nolanea*, *Galera*, *Psathyrella*.

* CONOPILEI. Pileus conic-campanulate. Gills ascending, adnexed, often free. Stem stiff. Veil none.

780. Agaricus (Psathyra) conopileus. Fr. Hym. Eur. p. 304.

Cono-pil'eus, from *conus* = a cone, and *pileus* = a felt cap shaped like the half of an egg. From the conical pileus.

Pileus submembranaceous, campanulate, *even*, smooth, *growing pale*; stem tall, attenuated upwards, smooth, silvery-shining; gills slightly adnexed, crowded, brownish purple.—*Cooke Illus. t. 575.*

In gardens. Rare.

781. Agaricus (Psathyra) mastiger. B. & Br. Ann. Nat. Hist. No. 921, t. 14, f. 6.

Mast'i-ger, from μαστός = the breast, and *gero* = I bear. From the mammiiform pileus.

Pileus conico-campanulate, repand, dark *brown*, then tan-coloured, hygrophanous, with a *prominent* teat-like *umbo*; stem straight, attenuated upwards; gills ascending, fixed, *umber*.—*Fr. Hym. Eur. p. 304. Cooke Illus. t. 591 A.*

On the roadside, amongst grass. Sept.

782. Agaricus (Psathyra) glareosus. B. & Br. Ann. Nat. Hist. (1833), p. 372.

Glareo'sus = gravelly. From its habitat.

Pileus campanulate, obtuse or umbonate, grey, apex pallid chestnut, striate floccose, with shining atoms; stem fistulose, invested with white fibrils, brown, gills broadly adnate, *umber*.—*Cooke Illus. t. 591 B.*

On gravelly soil, after wet weather. June.

Pileus $\frac{1}{2}$ in. across, very minutely tomentose; stem 1-2 in. high, 1 line thick; gills broad behind. Spores nearly black. Flesh brown, especially close to the gills.

783. Agaricus (Psathyra) corrugis. Pers. Syn. p. 424.

Corrugis having wrinkles or folds, corrugate.

Pileus submembranaceous, campanulate, umbonate, somewhat wrinkled, smooth, growing pale; stem elongated, equal, smooth, white; gills sinuate, fixed, ventricose, violet, then black.—Fr. Hym. Eur. 304. Cooke Illus. t. 579.

In pastures.

var. β . **gracilis.** Fr. Bull. t. 561, f. 1. B. & Br. Ann. N. II. (1866), No. 1126*.

Habit more slender.

On the ground. Aug.

var. **vinosus.** Corda in Sturm. 19, t. 4.

Pileus somewhat roseate.—Cooke Illus. t. 592.

In gardens, &c.

784. Agaricus (Psathyra) pellospermus. Bull. Champ. t. 561, f. 1.

Pello-spermus, from $\pi\epsilon\lambda\lambda\acute{o}s$ = dark-coloured, and $\sigma\pi\acute{\epsilon}\rho\mu\alpha$ = seed, spore.

Pileus subcampanulate, or subovate, even, then striate, sometimes rugose, white or ochrey white, becoming fuliginous with age; stem fistulose, naked, nearly equal, white, or of the colour of the pileus; gills broad, free, much narrowed at the tips, cinereous, then fuliginous, at length black; flesh thin, white.—Cooke Illus. t. 577.

On the ground.

785. Agaricus (Psathyra) gyroflexus. Fr. Hym. Eur. p. 305.

Gyro-flexus, from *gyrus* = a circle, and *flexus* = bent.

Pileus membranaceous, conic-campanulate, triate, atomate, becoming pallid; stem slender, flexuose, silky, shining white; gills adnate, crowded, soft, becoming purplish grey.—Cooke Illus. suppl.

Margin of woods.

Pileus 5 lines broad, grey, disc rufescent. Stem 2 in. long.

**** OBTUSATI.** Pileus campanulate convex, flattened, smooth, or atomate. Gills plane, or arcuate adfixed; veil none.

786. Agaricus (Psathyra) spadiceo-griseus. Schæff. Icon. t. 237.

Spadiceo-griseus, from *spadiceus* = date-brown, and *griseus* = grey. From the colour of the pileus.

Pileus submembranaceous, conical, then campanulate, expanded, sub-umbonate, smooth, striate to the middle, hygrophanous; stem

firm, attenuated upwards, shining white, striate at the apex ; gills adnexed, rather crowded, brown.—*Fr. Hym. Eur.* 306. *Cooke Illus. t.* 611.

On chips, &c.

787. Agaricus (Psathyra) obtusatus. *Fr. Hym. Eur. p.* 306.

Obtusatus = blunted, obtuse.

Pileus submembranaceous, conical, campanulate, then expanded, obtuse, smooth, *wrinkled, hygrophaneous, rather shining* ; stem somewhat rigid, equal, even, nearly naked, pallid ; incurved at the base ; gills adnate, sub-ventricose, pallid, then umber.—*Cooke Illus. t.* 593.

On oak trunks and on the ground.

* * FIBRILLOSI. Pileus and stem floccose, or fibrillose from the universal veil.

788. Agaricus (Psathyra) bifrons. *Berk. Eng. Fl. v., p.* 114.

Bi-frons = with two foreheads or faces, like Janus. From the changing colour.

Pileus submembranaceous, campanulate, obtuse, *rugulose*, ochraceous brown, tinged with red, turning pale-tan ; stem straight, fistulose, naked ; gills pinkish-cinereous, adnate ; margin white.—*Fr. Hym. Eur.* 307. *Berk. Outl. p.* 173. *Cooke Illus. t.* 594.

In ditches. Sept.

var. *semitinctus*. *Phil. in Cooke Illus. t.* 594 B.

Semi-tinctus = half-dyed.

789. Agaricus (Psathyra) semivestitus. *Berk. & Br. Ann. N. H. No.* 920, *t.* 14, *f.* 5.

Semi-vestitus = half-clothed.

Pileus ovate, obtuse, brown, growing pale, even, sprinkled to the middle with short *snowy fibrils* ; stem *fibrillose, silky*, white ; gills ascending, adnate, umber.—*Fr. Hym. Eur. p.* 307. *Cooke. Illus. t.* 578.

Amongst grass in rich pastures. Oct.

790. Agaricus (Psathyra) fatuus. *Fr. Hym. Eur. p.* 308.

Fatuus = foolish ; tasteless.

Pileus somewhat membranaceous, ovate-campanulate then expanded, *rugose, at first fibrillose*, then smooth, stem slender, *becoming smooth*, white, striate and mealy at the apex, gills adnate, crowded, linear, whitish then brown.—*Cooke Illus. t.* 595 A.

In gardens, &c.

Very fragile. Pileus clay colour then whitish, spores umber. Veil none,

791. Agaricus (Psathyra) fibrillosus. Pers. Syn. p. 424.

Fibrillo'sus = full of fibrils, fibrillose.

Pileus sub-membranaceous, campanulato-convex, then expanded, *slightly striate*, at first fibrillose; stem *elongated*, very fragile, white, *fibrilloso-squamose*; gills adnate, plane, very broad behind, purplish-black.—Fr. Hym. Eur. 308. Cooke Illus. t. 595 B.

On the ground, in woods. Rare.

792. Agaricus (Psathyra) Gordoni. B. & Br. Ann. N. H. No. 922, t. 15, f. 7.

Gord'oni, in honour of the Marchioness of Huntley.

Cæspitose; pileus campanulate, pallid cinereous, then whitish, more or less *floccoso-squamulose*, *sulcato-striate*; stem flexuose, floccose, becoming smooth, whitish pruinose above; gills ascending, narrowly adnate, distant, cinereous.—Fr. Hym. Eur. 308. Cooke Illus. t. 580 A.

On old stumps. Oct.

793. Agaricus (Psathyra) helobius. Kalchb. Icon. t. 17, f. 4.

Helob'ius = living in marshes; from ἑλος = a marsh, and βίος = life.

Pileus submembranaceous, conical campanulate, soon plane, somewhat umbonate, with concentric elevated ridges at the disc, otherwise *radiately rugose*, *fuliginous*, margin striate brown; stem fistulose, slender, umber becoming reddish, clad with fugacious whitish flocci; gills adnate, rounded behind, rather crowded, fuliginous.—Fr. Hym. Eur. 308. Cooke Illus. t. 579.

Moist places in pine woods.

794. Agaricus (Psathyra) pennatus. Fr. Hym. Eur. p. 308.

Penna'tus = feathered.

Pileus submembranaceous, campanulate, obtuse, *even*, at first clad with *white scales*, then naked; stem villous, silvery, pulverulent above; gills adnexed, crowded, broad, livid, then brownish-black.—Cooke Illus. t. 580 B.

On naked soil in gardens.

795. Agaricus (Psathyra) gossypinus. Fr. Hym. Eur. p. 309.

Gossyp'inus = cottony.

Pileus submembranaceous, campanulate, then expanded, *tomentose*, becoming smooth; margin striate; stem tomentose, whitish; gills adnexed, ventricose, white, then brownish-black.—Bolt. t. 71, f. 1. Cooke Illus. t. 612 A.

In woods on the ground. Rare.

796. Agaricus (Psathyra noli tangere.) *Fr. Hym. Eur.* 309.

Noli-tangere = do not touch. From its extreme fragility.

Pileus membranaceous, campanulate, then expanded, *everywhere striate*, hygrophanous, squamulose about the margin; stem fragile, nearly naked, fuscous, *smooth at the apex*, gills adnate, broad, pallid fuscous.—*Sow. t.* 167. *Cooke Illus. t.* 612 B.

Amongst chips.

797. Agaricus (Psathyra) microrhizus. *Lasch. No.* 468.

Micro-rhizus, from μικρός = small, and ρίζα = root.

Pileus membranaceous, campanulate, even, dry, shining with atoms, at first *yellow-hairy*; stem thin, short, *rooting silky*, whitish, gills adnexed, crowded, narrow, pallid then blackish-brown.—*Fr. Hym. Eur. p.* 309. *Cooke Illus. t.* 596 A.

In grassy places, in gardens, &c.

798. Agaricus (Psathyra) urticæcola. *Berk. & Br. Ann. N. II. No.* 919.

Urticæ'cola, from *urtica* = a nettle, and *colo* = I inhabit.

Pileus campanulate, *flocculose, white*, margin striate; stem fistulose, attenuated upwards, flocculent from the first, white; gills ventricose in front, attenuated behind, white, then chocolate colour.—*Fr. Hym. Eur. p.* 309. *Cooke Illus. t.* 596 B.

On nettle roots. Aug.

[END OF VOL. IV OF "ILLUSTRATIONS."]

Series 5. **Coprinarii.** *Fr. Epicr. p.* 234.

Coprinarii, because so nearly resembling *Coprinus*; from κόπρος = dung.

Spores black.

Sub-Gen. 37. **PANÆOLUS.** *Fr. Epicr.* 234.

Panæ'olus, παν—αίολος = all-variegated. From the gills.

Veil, when present, interwoven, sometimes wanting; stem polished, rather firm; pileus somewhat fleshy, viscid when moist, shining when dry, *never striated*, the margin *exceeding the variegated gills*; gills clouded, never becoming purple or brown. Spores black, oval, smooth.

HAB. Almost all grow on dung, often near towns, in summer and autumn.

* *Pileus viscid, shining when dry.*

799. Agaricus (Panæolus) separatus. *Linn. Succ. No. 1220.*

Separatus = separated; *i.e.*, not gregarious.

Pileus somewhat fleshy, campanulate, obtuse, even, viscid; stem straight, shining, white, *thickened downwards, ring distant*; gills fixed, cinereous-black.—*Fr. Hym. Eur.* 310. *Bolt. t.* 53. *Berk. Outl. t.* 11, *f.* 7. *A. semiovatus.* *Sow. t.* 131. *Price f.* 39. *Cooke Illus. t.* 623.

On dung. Common.

800. Agaricus (Panæolus) egregius. *Massee in Grevillea* XIV., *p.* 91.

Egregius = distinguished, conspicuous.

Pileus ovate-campanulate, smooth, even, viscid when moist, *bright orange brown*, disc darker, fleshy, exceeding the gills at the margin, with a trace of agglutinated down on the pileus, *virgate* when dry; flesh ochraceous; stem thickened at the base, solid, fibrillose, readily splitting longitudinally, *brown without and within*, duller than the pileus, white and cottony at the base, smooth at the apex; gills broad, ventricose, adnexed, crowded, thin, brownish black, edge entire, paler, dry, not deliquescent, spores brown, then blackish-purple, oblong-ovate with a minute apiculus. Smell none.—*Cooke Illus. t.* 624.

On the ground.

Pileus $2\frac{1}{2}$ inches high, 2 inches broad. Stem 5 inches long, half an inch thick. Gills half an inch broad in the centre.

801. Agaricus (Panæolus) leucophanes. *B. & Br. Ann. N. II.* (1866), *No.* 1127, *t.* 11, *f.* 1.

Leucophanes, from λευκός = white, and φαίρω = I appear.

Pileus campanulate, obtuse, *viscid*, shining when dry, *innate-silky white*, here and there with an ochraceous tinge; margin *appendiculate*; stem attenuated upwards, white, fibrillose, with scattered farinaceous particles, *transversely subundulate*, fistulose; gills adnate, pale, flesh-tinted grey, then black.

In grass fields. Aug.

Stem 2 inches long, 1 line thick in the middle; pileus $\frac{3}{4}$ inch diam.

802. Agaricus (Panæolus) fimiputris. *Bull. Champ. t.* 66.

Fimiputris, from *finus* = manure, and *putris* = decaying.

Pileus submembranaceous, conical, then expanded, somewhat gibbous, even, viscid; stem *slender, equal*, smooth, pallid; annular zone marked; gills fixed, livid-black.—*Fr. Hym. Eur.* 310. *Bolt. t.* 57. *Berk. Outl. t.* 11, *f.* 6. *Cooke Illus. t.* 625.

On dung and in pastures. Common.

803. Agaricus (Panæolus) phalænarum. *Fr. Hym. Eur.* 310.

Phalæna'rum, from *φάλαινα* (better *φάλλαίνα*) = a moth. From its likeness to *Ag. papilionaceus*.

Pileus rather fleshy, campanulato-convex, obtuse, even, smooth, viscid; veil appendiculate, fugacious; stem equal, rather firm, almost naked, pallid rufescent; gills adnexed, broad, cinereous black.—*Bull. t.* 58. *Cooke Illus. t.* 626.

On dung. Sept.

804. Agaricus (Panæolus) scitulus. *Massee in Grevillea xv., p.* 65.

Scitulus = handsome, elegant.

Pileus campanulate, obtuse, smooth, even, viscid, margin exceeding the gills, dirty ochre, pale; flesh thin, white, stem equal, fistulose, white, shining, base peronate, sheath ending in a persistent ring below the middle of the stem; gills crowded, narrow, becoming ashy grey, speckled with the black spores, margin entire, paler, spores black, with a colourless hilum, narrowly elliptical, 12-13, \times 4 μ .—*Cooke Illus. ined.*

On soil in flower-pot. Scarborough.

Pileus $\frac{1}{2}$ in. broad, rather higher than broad. Stem $1\frac{1}{2}$ in. long, about one line thick. It resembles *Ag. separatus* in miniature, but differs in the sheathed stem and basal ring.

** *Pileus opaque when moist, when dry subflocculose.*

805. Agaricus (Panæolus) retirugis. *Batsch. Epic. f.* 91.

Reti'rugis = with a network (*rete*) of wrinkles (*rugæ*).

Pileus somewhat fleshy, globose, then hemispherical, subumbonate, reticulated with raised ribs, sprinkled with opaque atoms; veil torn, appendiculate; stem equal, pruinose, pinkish purple; gills fixed, ascending, cinereous black.—*Fr. Hym. Eur.* 310. *Cooke Illus. t.* 627.

On dung.

806. Agaricus (Panæolus) sphinctrinus. *Fr. Hym. Eur.* 311.

Sphinctrinus, from *σφιγκτήρ* = a tight band. Because the gills never expand.

Pileus rather fleshy, parabolic, obtuse, opaque, even, moist, rather silky when dry, the white veil at first appendiculate, stem equal, straight, fuliginous grey, apex even, pruinose; gills adnate, crowded, cinereous, becoming black, edge of the same colour.—*Cooke Illus. t.* 628.

On dung, &c.

Stem 2-3 in. long, 1 line thick.

* * *Pileus dry, smooth, shining, without zone.*

807. Agaricus (Panæolus) campanulatus. Linn. Suec. No. 1213.

Campanula'tus = shaped like a little bell (*campanula*).

Pileus somewhat fleshy, campanulate, dry, even, smooth, somewhat shining; stem equal, straight, *rufous, striate above, powdered with black*; gills fixed, ascending, variegated with grey and black.—*Fr. Hym. Eur.* 311. *Bull. t.* 561, *f.* 2, *L.* Cooke *Illus. t.* 629.

On rich soil, &c. Common.

808. Agaricus (Panæolus) papilionaceus. Bull. Champ. t. 561, f. 2.

Papilionaceus = from *papilio* = a butterfly.

Pileus somewhat fleshy, hemispherical, smooth, *when dry rimoso-squamose*; stem equal, even, whitish, powdered with white above; gills *broadly adnate, very wide*, at length plane, blackish.—*Fr. Hym. Eur.* 311. Cooke *Illus. t.* 630.

On rich soil, dung, &c. Common.

809. Agaricus (Panæolus) caliginosus. Jungh. Linn. v. 5, t. 6, f. 13.

Caligino'sus = dark; from *caligo* = darkness.

Pileus rather fleshy, campanulate, obtuse, even, smooth; stem equal, *even, naked, of the same colour*; gills slightly adnexed, ascending, lanceolate, fuliginous then black.—*Fr. Hym. Eur.* 312. Cooke *Illus. t.* 631 A.

In grassy places.

** *Pileus dry, smooth, zoned at the margin.*

810. Agaricus (Panæolus) subbalteatus. Berk. & Br. Ann. N. H. No. 923.

Sub-baltea'tus = somewhat banded, zoned. *Balteus* = a belt.

Pileus convex, fleshy, *hygrophanous*, fawn-coloured, pallid when dry, zoned at the margin, rugulose; stem fragile, *rufous brown*, with white fibrils; gills brownish, adnate, subventricose.—*Fr. Hym. Eur.* 312. Cooke *Illus. t.* 631 B.

In a tare field. Sept.

Stem 2 in. and more long, 1 line thick; pileus 1-1½ in. broad.

811. Agaricus (Panæolus) acuminatus. Fr. Hym. Eur. 312.

Acumina'tus = pointed like a needle, *acus*.

Pileus rather fleshy, conic, acuminate, even, smooth, shining, zoned about the margin with a blackish line; stem thin, equal, pruinose, bicoloured; gills adnexed, ventricose, crowded, becoming blackish.—Cooke *Illus. t.* 632 A.

On dung. Oct.

Stem 1-3 in. long, thickened at the base.

812. Agaricus (Panæolus) fimicola. Fr. Hym. Eur. 312.

Fimi'cola, from *simus* = manure, and *colo* = I inhabit.

Pileus somewhat fleshy, campanulato-convex, *obtuse*, smooth, opaque; marked near the margin with a *narrow brown zone*; stem fragile, elongated, equal, pallid, pruinose above; gills adnate, broad, variegated with grey and brown.—*Bolt. t. 66, f. 1. Cooke Illus. t. 632 B.*

On dung, rich pastures, &c.

var. **cinctulus.** Bolt. Fung. t. 152.

Cinct'ulus, diminutive of *cinctus* = a girdle.

Pileus somewhat fleshy, campanulate, then expanded, even, smooth, margin with a *broad brown zone*; stem rather firm, equal, brownish, gills free (?), ventricose, olivaceous black.

On dung.

Somewhat doubtful variety, resting on Bolton's figure.

Sub-Gen. 38. PSATHYRELLA. Fr. Epicr. 237.

Psathyrella, diminutive of *Psathyra*, q.v.

Veil inconspicuous, not interwoven; pileus membranaceous, striated, margin straight, adpressed to the stem, *not exceeding the gills*; gills adnate or free, spores black.

* *Stem straight, smooth.*

813. Agaricus (Psathyrella) subatratus. Batsch. fig. 89.

Sub-atra'tus = rather blackened, dark.

Pileus rather membranaceous, campanulate, then expanded, umbonate, striate, rugulose, *rufescent*, then pale, sprinkled with pruinose atoms; stem straight, rather firm, shining with a silky lustre, pallid, naked; gills adnexed, crowded, fuliginous, becoming black.—*Fr. Hym. Eur. 313. Cooke Illus. t. 633.*

In grassy places. Sept.

Pileus rufescent, growing pale, scarce exceeding 1 in. broad. Stem 1½ line thick, clad with whitish down at the base.

814. Agaricus (Psathyrella) gracilis. Fr. Hym. Eur. 313.

Gra'cilis = slender.

Pileus submembranaceous, conical, slightly *striate* when moist, hygrophanous; stem slender, straight, *naked*, pallid; gills broadly adnate, subdistant, cinereous, then black, edge pale rose.—*Cooke Illus. t. 634.*

On hedge borders.

815. Agaricus (Psathyrella) hiascens. *Fr. Hym. Eur.* 314.

Hiascens = gaping, split into furrows.

Pileus membranaceous, campanulate, smooth, *fisso-sulcate*, disc even; stem straight, rigid, brittle, smooth, white; gills adnate, linear, sub-distant, acute in front, *pallid then black*.—*Bull. t.* 552, *f.* 2, *F. G.* *Cooke Illus. t.* 635.

Under hedges.

816. Agaricus (Psathyrella) aratus. *Berk. Outl. p.* 176.

Ara'tus = ploughed, *i.e.*, furrowed.

Pileus membranaceous, campanulato-conic, rather acute, deeply sulcate; stem tall, thickened at the base, white, smooth, fistulose; gills lanceolate, quite free, purplish-black.—*Fr. Hym. Eur.* 314. *Cooke Illus. t.* 636.

Under hedges.

817. Agaricus (Psathyrella) tzepidus. *Fr. Hym. Eur.* 314.

Trep'idus = restless, trembling.

Pileus membranaceous, campanulate, obtuse, smooth, very densely striate, hygrophanous; disc even; stem nearly straight, smooth, hyaline, and pellucid; gills adnate, *ventricose*, *crowded*, thin, sooty-black.—*Pers. Myc. Eur.* iii., *t.* 29, *f.* 1. *Cooke Illus. t.* 655 A.

On wet ground.

818. Agaricus (Psathyrella) hydrophorus. *Bull. Champ. t.* 558, *f.* 2.

Hydroph'orus = carrying water (*ὑδωρ*), moist.

Pileus membranaceous, campanulate then expanded, smooth, margin *striate*, at length *revolute*; stem ascending, smooth, dripping with moisture, white; gills adnate, *crowded*, *narrowly linear*, livid, becoming black.—*Fr. Hym. Eur.* 314. *Cooke Illus. t.* 655 B.

In gardens.

**** Stem flexuous, apex pruinose.**

819. Agaricus (Psathyrella) caudatus. *Fr. Obs. II., p.* 187.

Caudatus = tailed; from the root.

Pileus membranaceous, conico-campanulate, striate, hygrophanous, even when dry; stem elongated, somewhat attenuated from the rooting base, at length twisted; gills adnate, cinereous, becoming black.—*Fr. Hym. Eur.* 314. *Cooke Illus. t.* 637.

Amongst the stumps of a wooden pavement.

A small form. Pileus at first sienna brown. At length whitish, often transversely cracked; stem at first white, fibrillose; gills ventricose, adnate.—*B. & Br.*

820. Agaricus (Psathyrella) pronus. *Fr. Hym. Eur.* 315.

Pronus = lying down, prostrate; from the insufficient stem.

Pileus membranaceous, hemispherical, obtuse, striate, hygrophanous, *opaque* when dry, *slightly silky, atomate*; stem very slender, *equal, flexuose*, sub-pellucid; gills adnate, ventricose, subdistant, livid, then sooty-black.—*Cooke Illus. t.* 656.

Amongst grass.

821. Agaricus (Psathyrella) empyreumaticus. *B. & Br. Ann. N. II.* 1262.

Empyreumaticus, from *ἐμπύρεος* = scorched, burnt. From the diagnostic black spores.

Pileus expanded, *hygrophanous, sprinkled with atoms*, rufous, growing pale, *margin crenate*; stem elongated, between silky and scurfy, pallid, narrowly fistulose; gills broad, thick, distant, adnate, with a decurrent tooth, rufous, with a pallid edge.—*Fr. Hym. Eur.* 315. *Cooke Illus. t.* 657 A.

On a wooden pavement. Oct.

Pileus $1\frac{1}{2}$ in. across, margin crenate; stem $2\frac{1}{2}$ in. high, $1\frac{1}{2}$ line thick, narrowly but distinctly fistulose; gills 2 lines broad, connected by veins, rufous, then brown-purple; spores black.

822. Agaricus (Psathyrella) atomatus. *Fr. Hym. Eur.* 315.

Atomatus = covered with (shining) atoms.

Pileus submembranaceous, campanulate, obtuse, slightly striate, hygrophanous, dry, rugulose, entire, *furfuraceous with shining atoms*; stem *lax*, fragile, white, mealy at the apex; gills adnate, broad, cinereous, then black.—*Cooke Illus. t.* 638.

About hedge borders.

823. Agaricus (Psathyrella) crenatus. *Lasch. in Fr. Hym. Eur.* 315.

Crenatus = notched; from the crenate margin.

Pileus membranaceous, hemispherical, sulcate, atomate, hygrophanous, *margin crenate*, stem slightly curved, fragile, smooth, whitish, *striate above, and mealy*; gills adnate, somewhat ventricose, from yellowish brown becoming black.—*Cooke Illus. ined.*

On grassy ground.

Stem 3 cm. long, 1 to 1.5 mm. thick; slightly thicker above than below; gills broad, adnate, edge whitish. Pileus 1 to 1.25 cm. across, whitish, with a rufous tinge, atomate, margin crenate.

824. Agaricus (Psathyrella) disseminatus. *Fr. Hym. Eur.* 316.

Disseminatus = spread abroad, scattered. Because, as Fries says (*l.c.*), it is found everywhere.

Pileus membranaceous, ovato-campanulate, *furfuraceous*, then naked, sulcato-plicate, entire, discoloured; stem *lax*, subflexuose, fragile, at first mealy, then smooth; gills adnate, broadly linear, whitish, cinereous, then black.—*Sow. t.* 166. *Cooke Illus. t.* 657 B.

About trunks of trees, and on the ground. Common.

Forming large dense tufts.

GENUS 2. **HIATULA.** *Fries Novæ Symbolæ, p. II.*

Hiatula, diminutive of *hiātus* = a cleft. From the splitting pileus.

Pileus very thin, without distinct pellicle, formed from the union of the back of the gills, splitting when expanded, as in very thin species of *Coprinus*, but not deliquescent, and spores white.

825. Hiatula Wynnii. *B. & Br. Ann. N. H. No. 1772.*

Wynnii = in honour of Mrs. Lloyd Wynne.

White. Pileus tender, striate, pulverulent, darker in the centre; stem slender, striate; gills rather broad, rough.—*Cooke Illus. t. 688.*

In a stove at Kew.

Pileus 1½ in. across; stem 1 in. high, 1 line thick. One specimen became darker in drying, and had a longer and thicker stem.

GENUS 3. **COPRINUS.** *Fr. Epicr. p. 241.*

Coprinus, from *κόπρος* = dung; their frequent habitat.

Hymenophore distinct from the stem, gills membranaceous, at first crowded, coherent, seissile, at length deliquescent into a black fluid, trama none. Spores even, black.

HAB. In rank places, often on dung, but sometimes on decaying wood.

Tribe 1. Pelliculosi.—Cuticle fleshy, or membranaceous.

* **COMATI.** With a volvate ring, cuticle of pileus torn in scales.

826. Coprinus comatus. *Fr. Hym. Eur. 320.*

Comatus = having long hair (*coma*), shaggy.

Pileus rather fleshy, cylindrical, then expanded, even, soon torn into broad, adpressed, scattered scales; stem hollow, fibrillose, bulb solid, rooting; ring moveable; gills free, linear, white, then purplish, at length black.—*Sow. t. 189. Grev. t. 119. Badh. i., t. 10, f. 2; ii., t. 7, f. 1-3. Price, f. 49. Trans. Woolh. Cl. 1868, t. 13. Curt. Fl. L. t. 93. Hogg. & Johnst. t. 3. Cooke Illus. t. 658.*

Sides of roads, pastures, &c. Common. Esculent.

827. Coprinus ovatus. *Schæff. Icon. t. 7.*

Ovatus = of the shape of an egg, *ovum*; ovate.

Pileus submembranaceous, ovate, then expanded, striate; at first woven into densely imbricated, thick, concentric scales; stem

bulbous, rooting, flocculose, hollow above, ring deciduous; gills remote, lanceolate, white, then brownish-black.—*Fr. Hym. Eur.* 320. *Cooke Illus. t.* 659.

In pastures.

Spores $12 \times 8 \mu$. G.M.

828. *Coprinus sterquilinus.* *Fr. Hym. Eur.* 321.

Sterquilinus, from *sterquilinum* (or *sterquilinium*) = a dung-pit.

Pileus membranaceous, conical, then expanded, sulcate, at first villous or silky, *disc* rather fleshy, *squarroso-squamose*; stem attenuated; fibrillose, *base* solid, not rooting, *annulate*; gills free, ventricose, purplish.—*Cooke Illus. t.* 660.

On dung. Rare.

829. *Coprinus oblectus.* *Bolt. Fung. t.* 142.

Oblectus, freely formed from *oblecto* = I delight; confused with *dilectus*, a species to which it is akin (*Fries*).

Pileus membranaceous, conic-campanulate, *everywhere* silky, then smooth, *sulcate*; stem hollow, soft, silky, becoming even, with a *sheathing ring-like* base, gills free, linear, *flesh-coloured*, growing black.—*Fr. Hym. Eur.* 321. *Cooke Illus. t.* 661, after Bolton.

On dung.

No record since Bolton's time.

? Spores $23-26 \times 14 \mu$. G.M. From an uncertain specimen.

**** ATRAMENTARIUM.** Somewhat ringed (not volvate), pileus dotted, or spotted with innate minute scales.

830. *Coprinus atramentarius.* *Fr. Hym. Eur.* 322.

Atramentarius, from *atramentum* = ink; into which it seems to deliquesce.

Pileus slightly fleshy, ovate, then expanded, repand, spotted at the top with innate squamules; stem hollow, firm, *zoned within*; ring abrupt, fugacious; gills free, ventricose, white, then purplish black.—*Price f.* 40. *Sow. t.* 188. *Berk. Outl. t.* 12, *f.* 1. *Badh. i. t.* 10, *f.* 1; *ii. t.* 9, *f.* 1-2. *Cooke Illus. t.* 662.

About old stumps and on naked soil. Common. Esculent.

Spores $12 \times 6 \mu$. G.M.

831. *Coprinus soboliferus.* *Fr. Hym. Eur.* 322.

Soboliferus, from *soboles* (better *suboles*) = an off-shoot; and *fēro* = I bear.

Pileus submembranaceous, ovate, then expanded, *truncate*, spotted with scales, dirty white; stem stuffed, rather ventricose, tuberously rooting with runners; ring fugacious; gills free, ventricose, pallid, becoming black.—*Cooke Illus. t. 848.*

At the base of trunks.

Spores $15 \times 7 \mu$. G.M.

832. *Coprinus fuscescens.* *Fr. Hym. Eur. 322.*

Fuscescens = becoming dusky (*fuscus*.)

Pileus submembranaceous, ovate, then expanded, unpolished; disc rather fleshy, *even or cracked*; stem hollow, fragile, incurved, subfibrillose, scarcely annulate; *gills affixed*, umber-black.—*Cooke Illus. t. 663.*

On dead stumps.

Spores $10-12 \times 5 \mu$. G.M.

var. *rimoso-squamosus.* *Cooke. Illus. t. 664.*

Rimo'so-squamo'sus, from *rima* = a crack, and *squama* = a scale.

Pileus becoming cracked into angular patches.

About stumps.

* * PICACEI. Universal veil flocculose, at first continuous, then broken up into superficial areolate scales.

833. *Coprinus picaceus.* *Fr. Hym. Eur. 323.*

Pica'ceus, from *pica* = a magpie; variegated, pied.

Pileus membranaceous, ovato-campanulate, striate, variegated with *broad, white, superficial scales*; stem hollow, bulbous, not rooting, fragile, *fibrillose*; gills free, ventricose, cinereous-black.—*Sow. t. 170. Cooke Illus. t. 665.*

On roadsides, &c.

834. *Coprinus apthosus.* *Fr. Hym. Eur. 323.*

Aptho'sus = suffering from "the thrush" (*ἀφθαί*). From the floccose scales.

Pileus membranaceous, ovato-campanulate, without striae, sprinkled with superficial floccose scales, then naked; *stem* hollow, equal, *twisted, fibrillose*; gills *adnate*, linear, white, then black.—*Bolt. t. 26. Cooke Illus. t. 666, after Bolton.*

In hollow trees, cellars, &c.

Spores $15-16 \times 10 \mu$. G.M.

835. *Coprinus flocculosus*. *D. C. Flor. Fr.* v., 45.

Flocculo'sus = full of flocks of wool (*flocchi*), floccose.

Pileus membranaceous, *ovate*, then expanded, striate, discoid, dirty white; clothed with evanescent floccose scales, at length smooth; stem hollow, equal, smooth, naked; gills remote, ventricose, *violaceous*, then brownish-black.—*Fr. Hym. Eur.* 323. *Cooke Illus. t.* 667.

In pastures.

Spores $10 \times 8 \mu$. G.M.

836. *Coprinus similis*. *B. & Br. Ann. N. H.*, 1865, No. 1011.

Sim'ilis = like. Because it has the habit of the preceding species (*Fries*).

Pileus ovato-campanulate, lineato-striate, pallid, centre obscurely hygrophanous, clothed with *acute brown warts*; stem hollow, white, largest at the base; gills adnate, attenuated behind, sublinear, brownish near the margin.—*Fr. Hym. Eur.* 323.

On trunks of dead trees.

*** TOMENTOSI. Pileus at first floccose, or loosely villose.

837. *Coprinus exstinctorius*. *Fr. Hym. Eur.* 324.

Exstinctor'ius, from *exstinctor* = an extinguisher. From its shape.

Pileus submembranaceous, clavate, then campanulate, straight, margin striate, at first clothed with evanescent floccose scales; stem hollow, attenuated from the *rooting base*, smooth; gills reaching the stem, lanceolate, white, then brown-black.—*Bolt. t.* 24. *Cooke Illus. t.* 668.

On the ground.

Spores $10-11 \times 6 \mu$. G.M.

838. *Coprinus fimetarius*. *Fr. Hym. Eur.* 324.

Fimetarius = of or belonging to a dung-hill, *fimētum*.

Pileus submembranaceous, clavate, then conical, soon torn and revolute, at first rough with *white floccose scales*, then naked, longitudinally rimoso-sulcate, even at the apex; stem *squamulose*, thickened at the base, solid; gills free, lanceolate, then linear and flexuose, black.—*Cooke Illus. t.* 669.

On dung heaps.

Spores $12 \times 6 \mu$. G.M.

var. pullatus. *Fr.*

Pulla'tus = clothed in black.

Pileus adpressedly squamose, and tomentose, soon naked, fuscous becoming blackish ; stem equal, at length smooth.—*Sow. t.* 262.

Spores $12 \times 10 \mu$. G.M.

var. macrorrhizus. *Pers. Syn.* 398.

Macro-rhi'zus, from *μακρός* = long, and *ρίζα* = a root.

Pileus squamose ; stem shorter, rather marginately bulbous, rooting, villous.—*Cooke Illus. t.* 670.

Spores $12-14 \times 9 \mu$. G.M.

var. cinereus. *Schaff. t.* 100.

Ciner'eus = of the colour of ashes, *cinžres*.

Pileus membranaceous, floccosely mealy, then naked, ashy grey ; stem almost equal, twisted, not rooting, hollow at the base.—*Cooke Illus. t.* 671.

On dung.

839. Coprinus tomentosus. *Fr. Hym. Eur.* 325.

Tomento'sus = full of "stuffing," *tomentum* ; floccose, downy.

Pileus submembranaceous, cylindrical, then conical, striate, floccoso-tomentose, then longitudinally cracked ; stem hollow, rather short, equal, velvety ; gills free, linear, brownish, then black.—*Bolt. t.* 136. *Cooke Illus. t.* 672 A.

On dung and in rich pastures.

Spores $18 \times 9 \mu$. G.M.

840. Coprinus niveus. *Fr. Hym. Eur.* 325.

Niv'eus = snowy.

Pileus submembranaceous, oval, then campanulate, and expanded, floccoso-squamulose, almost persistently clad with dense white down ; stem fistulose, equal, villous, white ; gills subadnate, narrow, blackish.—*Sow. t.* 262 ? *Cooke Illus. t.* 672 B.

On horse dung. Common.

Spores $16 \times 12 \mu$. G.M.

841. Coprinus cothurnatus. *Godey in Gillet Champ. de France,* p. 605.

Cothurna'tus = buskined ; *cothurnus* = the high shoe or buskin worn by tragic actors.

Pileus very thin, conic-campanulate, then expanded, densely mealy, then umbonate and unequally split, wholly white, becoming reddish; stem fistulose, attenuated upwards, white, squamulose, base squamulose, *sheathing*; gills free, somewhat lanceolate, white, then flesh-coloured, at length black.

On cow dung.

Stem about 2in. long. Pileus 1in. broad, yellowish.

*** MICACEI. Pileus covered with scales or micaceous granules.
**

842. Coprinus micaceus. *Fr. Hym. Eur.* 325.

Mica'ceus, from *mica* = a little particle, a grain.

Pileus submembranaceous, oval, then campanulate, subrepand, striate, discoid, sprinkled with *fugacious, micaceous granules*, at length naked, rimoso-sulcate; stem hollow, *silky, even*, whitish; gills adnexed, lanceolate, whitish, *brown* to the middle, then turning black.—*Bolt. t.* 54. *Sow. t.* 261. *Grev. t.* 76. *Cooke Illus. t.* 673.

About old stumps. Common.

Spores $10 \times 5 \mu$. G.M.

843. Coprinus aratus. *Berk. §. Br. Ann. N. H., No* 927.

Ara'tus = ploughed; from the furrowed pileus.

Solitary. Tall. Pileus campanulate, umber, deeply sulcate, micaceous; disc rugose; stem attenuated upwards, sub-bulbous at the base, minutely silky, snow white; gills narrow, bright brown, free.—*Fries Hym. Eur.* 325. *Cooke Illus. t.* 674, 675.

In hollow trees. May.

Spores $15 \times 12 \mu$. G.M.

844. Coprinus radians. *Desm. Ann. Sc. Nat.* XIII, t. 10, f. 1.

Rad'ians = radiating.

Pileus membranaceous, ovato-campanulate, micaceous, disc *granuloso-squamose*, margin striate; stem equal, naked, short, *fibrilloso-radiating at the base*; gills reaching the stem, sublinear, white, then violaceous-black.—*Sow. t.* 145. *Fr. Hym. Eur.* 326. *Cooke Illus. t.* 676 A.

On plaster walls.

Spores $7 \times 4 \mu$. G.M.

845. Coprinus papillatus. *Batsch. Consp. f.* 78.

Papilla'tus = furnished with *papillæ*, little elevations.

Pileus membranaceous, ovate, then campanulate, striate, greyish mealy, then torn, disc *papillate with minute points*, livid smoky;

stem fistulose, smooth except at the base, *hyaline pellucid*; gills free, reaching the stem, black.—*Fr. Hym. Eur.* 326. *Cooke Illus. t.* 676 B.

On the ground.

Small, pileus about 3 lines. Spores $15 \times 7 \mu$. G.M.

*** GLABRATI. Pileus smooth, without scales, flocci, or granules.

846. *Coprinus alternatus*. Schum. Saell., No. 1874.

Alternatus = alternated; from the striæ being broad and narrow alternately.

Pileus rather fleshy, hemispherical, even, quite smooth, discoid, *chalky* and *pallid*, *disc pale umber*, stem hollow, attenuated from the thickened base, *smooth*; gills adnate, linear, cinereous, then black.—*Fr. Hym. Eur.* 327. *Cooke Illus. t.* 677.

On the ground.

Somewhat cæspitose. Stem 3-4 in. long, 4 lines thick at the base. Pileus $\frac{1}{2}$ l. in

847. *Coprinus deliquescens*. Bull. Champ. t. 558, f. 1.

Deliquescens = becoming moist, deliquescent.

Pileus submembranaceous, ovato-campanulate, then expanded, subrepand, broadly striate, smooth, *top studded with innate papillæ*; stem hollow, *corticate*, smooth; gills *at length remote*, linear, lurid black.—*Fr. Hym. Eur.* 327. *Cooke Illus. t.* 678.

On old stumps.

848. *Coprinus tardus*. Karsten, Hattsv. I., p. 543.

Tardus = slow, late.

Pileus membranaceous, campanulate, sulcate, quite smooth, becoming *gilvous* or *isabelline*; stem fistulose, a little thickened downwards, silky pruinose, then smooth, rather striate, white; gills adnate, whitish, then black.—*Cooke Illus. t.* 719.

On naked soil.

Spores $12-15 \times 7-9 \mu$. Rather angular.

849. *Coprinus congregatus*. Bull. Champ. t. 94.

Congregatus = collected into a flock, *grex*; cæspitose.

Pileus membranaceous, cylindrical, then campanulate, smooth, viscid, of *one colour*, *ochraceous*, margin lightly striate, stem fistulose, thin, short, smooth; gills reaching the stem, *linear*, white, becoming black.—*Fr. Hym. Eur.* 328. *Cooke Illus. t.* 679.

On ground by roadsides.

Densely cæspitose.

Tribe 2. *Veliformes*. Pileus very thin, without pellicle, at length splitting in a line with the gills, plaited sulcate. Stem thin, fistulose; gills wasting away into thin lines.

* CYCLODEI. Stem annulate or volvate.

850. *Coprinus Hendersonii*. *Berk. Hook. Journ. l. 26, f. 1.*

Hendersonii = in honour of J. L. Henderson.

Pileus very delicate, oval, campanulate, smooth, striate to the middle; stem filiform, becoming smooth, with a small erect entire ring (at length evanescent); gills black.—*Fr. Hym. Eur.* 328. *Berk. Outl. t. 24, f. 8. Price f. 114. Cooke Illus. t. 680 A.*

On hot beds and on dung in fields.

Small, $\frac{1}{2}$ -1 in. high, pileus scarcely 2 lines broad. Spores $10 \times 5 \mu$. G.M.

** LANATULI. Pileus veiled with fugacious superficial flocci. Gills free.

851. *Coprinus lagopus*. *Fr. Hym. Eur.* 329.

Lagopus, λαγώ-πους, rough-footed like a hare, λαγώς.

Pileus very thin, cylindrical, then campanulate, clothed with white flocci, at length split, radiate-sulcate, somewhat revolute; stem very fragile, on all parts woolly, white; gills free, at length remote, linear, black.—*Saund. & Sm. t. 19. Cooke Illus. t. 681.*

On dung.

Spores $15 \times 12 \mu$. G.M.

852. *Coprinus narcoticus*. *Batsch. fig 77.*

Narcoticus, ναρκοτικός, making stiff or numb. From the opium-like smell?

Fætid. Pileus very thin, clavate, then expanded, woolly, with white recurved floccose scales, at length naked and striate, hyaline; stem fragile, woolly, white, becoming smooth; gills free, approximate, white, then blackish.—*Fr. Hym. Eur. p. 329. Cooke Illus. t. 680 B.*

On dung.

"Smell highly disagreeable."

853. *Coprinus macrocephalus*. *Berk. Eng. Fl. v., p. 122.*

Mac'ro-ceph'alus, from μακρός = long, and κεφαλή = the head.

Pileus at first cylindrical, then cylindrico-campanulate, sprinkled with pointed scales; stem dirty white, fistulose, clothed with short cottony down and loose fibres, strigose at the base; gills linear, perfectly free, at length black.—*Fr. Hym. Eur.* 329. *Cooke Illus. t. 682 A.*

On putrid dung.

Spores 13×10 -11 μ . G.M.

854. Coprinus nycthemerus. *Fr. Hym. Eur. 330.*

Nycthemerus, νυχθημερος, lasting a day and night, ephemeral.

Pileus very thin, at first conical campanulate, *floccosely mealy*, soon splitting, flattened, radiately plicate, naked, striate, *grey, disc tawny*, stem flaccid, *smooth*; gills free, narrow, at length *remote*.—*Cooke Illus. t. 682 B.*

On dung.

Spores $9 \times 6 \mu$. G.M.

855. Coprinus radiatus. *Fr. Hym. Eur. 330.*

Radiatus = radiate, like the spokes of a wheel, *radii*.

Very delicate: pileus very thin, clavate, then campanulate, greyish, *tomentose*, soon splitting, expanded, plicato-radiate, yellowish; stem filiform, hyaline, becoming smooth, gills free, distant, few, pallid, then black.—*Bull. t. 542, f. L. & E.H. Cooke Illus. t. 683 A.*

On dung.

Spores $12 \times 7 \mu$. W.G.S.

856. Coprinus Spraguei. *B. & C. Ann. Nat. Hist. Oct., 1859.*

Spraguei, in honour of Charles J. Sprague.

Very delicate; pileus campanulate, then conical, tomentose, plicate; stem fistulose, pale cinnamon, gills few, narrow.—*Fr. Hym. Eur. 330. Cooke Illus. t. 683 B.*

In gardens. July

Spores $10 \times 6 \mu$. G.M. Must not be confounded with *C. plicatilis*.

* * FURFURELLI. Pileus mealy or micaceous, gills usually adnate in a ring at the top of the stem.

857. Coprinus domesticus. *Fr. Hym. Eur. p. 330.*

Domes'ticus = of or belonging to a house, *domus*.

Pileus thin, ovate, campanulate, obtuse, splitting, undulato-sulcate, *furfuraceo-squamulose*; stem attenuated, silky, white; gills fixed, crowded, linear, white with reddish, then brown-black.—*Huss. t. Cooke Illus. t. 684.*

On damp carpets, &c.

Spores $16-18 \times 9 \mu$. G.M.

858. Coprinus stercorarius. *Fr. Hym. Eur. 330.*

Stercora'rius = of or belonging to dung, *stercus*.

Pileus very thin, *ovate*, then campanulate, covered with a *dense white micaceous meal*, then expanded, margin striate, stem at first

ovately bulbous, then elongated, attenuated, *at first pruinata*, white, gills adnexed, ventricose, black.—*Cooke Illus. t. 685 A.*

On rich soil and dung.

Spores $14.15 \times 8 \mu$.

859. *Coprinus ephemerus.* Fr. Hym. Eur. 331.

Ephe'merus = ephemeral, lasting but for a day.

Pileus very thin, ovate, then campanulate, splitting, radiato-sulcate, sub-furfuraceous; *disc elevated*, even, rufescent; stem slender, equal, pellucid, smooth; gills *reaching the stem*, linear, whitish, then brown and black.—*Cooke Illus. t. 685 B.*

On dung hills. Common.

Spores $17 \times 10 \mu$. G.M.

860. *Coprinus sociatus.* Fr. Hym. Eur. 331.

Sociu'tus = associated, gregarious.

Pileus very thin, ovate, then campanulate, soon splitting, radiately plicate, mealy, tawny becoming paler, disc umber, at length *umbilicate*; stem attenuated, smooth, white; gills attached to a collar, greyish black.

On moist ground, in gardens, &c.

Stem 2 in. long, not pellucid.

861. *Coprinus plicatilis.* Curt. Fl. Lond. t. 200.

Plica'tilis = in folds, *plicae*, plicate.

Pileus very thin, ovali-cylindrical, then expanded, splitting, sulcato-plicate, somewhat smooth; disc broad, at length depressed, even; stem equal, smooth, white; gills adnate to a distinct collar, distant, greyish black.—*Sow. t. 364. Price j. 33. Fr. Hym. Eur. 331. Cooke Illus. t. 686 A.*

In pastures. Common.

Spores $12.14 \times 8.10 \mu$. G.M.

862. *Coprinus filiformis.* Berk. & Br. Ann. N. H. No. 928, t. 15, f. 8.

Fi'liformis = like a thread, *filum*; referring to the stem.

Very minute; pileus cylindrical, striate, grey, sprinkled with white micaceous particles; stem capillary, white, very minutely pilose.—*Fr. Hym. Eur. 332. Cooke Illus. t. 686 B.*

On the ground, in woods.

Spores 5μ diam. G.M.

*** HEMEROBII. Pileus always smooth.

863. Coprinus hemerobius. *Fr. Hym. Eur. 332.*

Hemero^l-bius = living the life ($\beta\acute{\iota}\omicron\varsigma$) of a day, $\eta\mu\epsilon\rho\acute{\alpha}$.

Pileus very thin, ovate, then campanulate, then expanded, splitting, sulcate, *smooth*, apex not prominent, bay brown; stem elongated, attenuated, *smooth*, pallid; gills linear, pallid, then black, adnexed to an obscure collar.—*Bolt. t. 31. Cooke Illus. t. 687 A.*

On roadsides.

Spores $12 \times 8 \mu$. G.M.

*** Not truly indigenous.

864. Coprinus platypus. *Berk. in Cooke Illus.*

Plat'ypus = with a broad foot, from $\pi\lambda\alpha\tau\acute{\upsilon}\varsigma$ and $\pi\omicron\upsilon\varsigma$.

Pileus thin, campanulate, convex, then expanded, white, then ochraceous-flocculose, stem slender, *discoïd* at the base, whitish, even; gills free, narrow, distant, becoming black.—*Cooke Illus. t. 687 B.*

On palm stems in conservatories.

Spores $8 \times 6 \mu$. G.M.

GEN. 4. **BOLBITIUS.** *Fr. Epicr. p. 253.*

Bolbit'ius, from $\beta\acute{o}\lambda\beta\iota\omicron\nu$ (better, $\beta\acute{o}\lambda\iota\omicron\nu$), cow-dung.

Hymenophore almost separate, universal veil none, partial veil in many cases obsolete; gills membranaceous, soft, dissolving, powdery with the rusty ovate spores.

HAB. Dung or rank earth.

A small genus, intermediate between *Agaricus* and *Coprinus* on one side, and *Coprinus* and *Cortinarius* on the other; it resembles *Coprinus* in its mode of growth, and ephemeral existence.

865. Bolbitius Boltoni. *Fr. Hym. Eur. 333.*

Bol'toni, in honour of James Bolton.

Pileus somewhat fleshy, viscid, at first smooth, then the membranaceous margin is sulcate; *disc darker, subdepressed*; stem attenuated, yellowish, ring fugacious, *at first flocculose*; gills subadnate, *livid yellow, then brown*.—*Bolt. t. 149. Cooke Illus. t. 689.*

On dung. June—Sept.

866. Bolbitius vitellinus. *Fr. Hym. Eur.* 333.

Vitellinus, of or belonging to the yolk of an egg, *vitellum*; from the colour.

Pileus between fleshy and membranaceous, ovate, then expanded, *viscid*, egg-yellow, at first even, then with the margin *sulcate* and split; stem fistulose, equal, clad with white scales; gills slightly adnexed, ochraceous clay-coloured.—*Cooke Illus. t.* 928 A.

On horse dung.

Pileus 2 in. broad.

867. Bolbitius fragilis. *Fr. Hym. Eur.* 334.

Fragilis = easily broken, brittle, fragile.

Pileus sub-membranaceous, viscid, pellucid, margin striate, *disc sub-umbonate*; stem attenuated, naked, smooth, yellow; gills attenuated, adnexed, yellowish, then pale cinnamon.—*Bolt. t.* 65. *Sow. t.* 96. *Cooke Illus. t.* 720 A.

On dung.

868. Bolbitius titubans. *Fr. Hym. Eur.* 334.

Titubans = tottering; from its delicate stem.

Pileus membranaceous, ovate campanulate, then expanded, yellow, discoid; stem slender, straight, shining, yellowish; gills slightly adnexed, pallid, then purplish or fleshy-brown (salmon coloured, B.).—*Sow. t.* 128. *Cooke Illus. t.* 690.

Amongst grass. May—Oct.

Spores $12 \times 8 \mu$. G.M.

869. Bolbitius apicalis. *Smith in Cke. Hdbk. t.* 121.

Apicalis, from its demarcated umbo or apex.

Pileus membranaceous, brown, striate from the first, then plicate, liable to split; disc ochraceous, somewhat fleshy, obscurely umbonate, the difference in colour between the two parts defined by a distinct line; stem hollow, striate, white, minutely pruinose under a lens; gills somewhat broad, ventricose, free, at first pressed to the stem, brown.—*Cooke Illus. t.* 720 B.

In pastures. Early summer.

870. Bolbitius tener. *Berk. Outl. p.* 183, *t.* 12, *f.* 2.

Tener = delicate, slender.

Very delicate; pileus white, moist, elongated, conical; stem

white, fistulose, bulbous at the base ; gills attenuated behind, nearly free, salmon colour.—*Cooke Illus. t. 691.*

Amongst short grass.

Spores $15-16 \times 10 \mu$. G.M.

871. *Bolbitius rivulosus*. B. & Br. Ann. N. H., No. 1773.

Rivulo'sus = full of little streams, *rivuli* ; furrowed.

Pileus campanulate, clay-coloured, rivulose ; stem attenuated upwards ; gills narrow, cinnamon.—*Cooke Illus. t. 928 B.*

On earth in an orchard house.

Pileus about $1\frac{1}{2}$ in. across. Very different from any other known species. Spores $10-12 \times 6-7 \mu$.

GEN. 5. **CORTINARIUS**. *Fr. Epicr. p. 255.*

Cortina'rius, from Low Latin *cortina* = a curtain (whence the English word). From the dependent veil.

Veil like a cobweb, distinct from the enticle of the pileus, superficial stem confluent with the hymenophore ; gills persistent, dry, becoming discoloured, becoming pulverulent with the slowly seceding spores ; trama fibrillose ; spores oblong, rusty ochre.

HAB. Woods and fields.

Tribe 1. *Phlegmacium*. *Fr. Epier. p. 256.*

Phlegma'cium, from $\phi\lambda\acute{\epsilon}\gamma\mu\alpha$ = shiny moisture.

Partial veil weblike ; pileus equally fleshy, viscid ; stem firm, dry.

† CLIDUCHII. Partial veil above depending in the form of a ring from the apex of the nearly equal or clavate stem.

Clidu'chii, from $\kappa\lambda\epsilon\iota\delta\omicron\upsilon\chi\omicron\varsigma$ = holding the keys, and so having custody of a place. Probably from its being the typical subdivision. (N.B. $\kappa\lambda\acute{\epsilon}\iota\varsigma$ does not mean a club, but a key or bolt ; so the name can have no reference to the often clavate stem.)

* *Gills pallid, then clay-coloured.*

872. *Cortinarius (Phlegmacium) triumphans*. Fr. Hym. Eur. 336.

Triumphans = triumphal. From the splendour of its appearance.

Pileus fleshy, convex, then plane, viscid, even, yellow, at first spotted with evanescent darker adpressed scales ; stem solid,

clavate; girt with *several tawny scaly concentric rings*; gills emarginate, quite entire, crowded, pallid, then clay-coloured.—*Cooke Illus. t. 692.* *Cortinarius sublanatus.*—*Hussey ii. t. 22.*

In woods, under birch.

Pileus yellowish. Stem 3-5 in. long, $\frac{1}{2}$ in. and more thick. Pileus 3-5 in. broad. Gills 3 lin. broad. Spores $9 \times 5 \mu$.

873. *Cortinarius (Phlegmacium) claricolor.* Fr. Hym. Eur. 336.

Clari'-color = bright-coloured.

Pileus compact, flattened, smooth, shining when dry, sometimes broken into scales; stem solid, attenuated, at first *floccosely scaly*, white, as well as the veil; gills somewhat adnexed, crowded, serrate, greyish-white, then pallid.—*Cooke Illus. t. 693.*

In woods.

Pileus yellow, flesh white.

874. *Cortinarius (Phlegmacium) turmalis.* Fr. Hym. Eur. 336.

Turma'lis = of or belonging to a troop or squadron, *turma*; not solitary.

Pileus fleshy, convex then plane, even, viscid, smooth, discoid; stem *cylindrical*, white, *sheathed* at the first *with the woolly white veil*, then naked; cortina superior, fibrillose, ring-like, persistent; gills emarginate, or decurrent, crowded, somewhat serrated, whitish, then clay-coloured.—*Cooke Illus. t. 694.*

Chiefly in beech woods.

Often densely *cæspitose*. Stem 3-6 in. long. Pileus ochraceous, yellow, shining. Gills never tinged with blue.

875. *Cortinarius (Phlegmacium) crassus.* Fr. Hym. Eur. 337.

Crassus = thick.

Pileus thickly fleshy, plane or depressed, of one colour; disc smooth, elsewhere *strigose with innate fibrils*; stem stout, plump, fibrillose, white, mealy at the apex; gills rounded, crowded, quite entire, pallid, then clay-coloured.—*Cooke Illus. t. 695.*

In moist woods.

Pileus 3-5 in. broad, dirty yellow, opaque. Spores almond-shaped, rough, $15 \times 7 \mu$.

876. *Cortinarius (Phlegmacium) balteatus.* Fries Hym. Eur. 337.

Balteatus = belted, girdled.

Pileus compact, flattened, viscid, *soon dry*, and *broken up into innate flocci*; margin becoming somewhat bluish, silky, inflexed; stem plump, solid, at first tomentose; apex velvety and as well as

the cortina, and flesh white; gills emarginate and decurrent, crowded, quite entire, whitish.—*Cooke Illus. t. 696.*

In dry places, chiefly in pine woods.

Variable, always robust and short. Pileus 3 in. and more broad. Stem $1\frac{1}{2}$ -2 in. long, and above an inch thick.

877. Cortinarius (Phlegmacium) sebaceus. *Fr. Hym. Eur. 337.*

Sebaceus, from *sebum* = tallow. Perhaps from its viscosity.

Growing pallid. Pileus fleshy, expanded, somewhat repand, with a pruinose whitish veil, rather viscid, flesh white; partial veil very fugacious, white; stem solid, stout, equal, fibrillose; gills emarginate, not clouded, clay-coloured.—*Cooke Illus. t. 697.*

In pine woods.

Stem 3-4 in. long, $\frac{1}{2}$ in. thick, white. Pileus $2\frac{1}{2}$ -5 in. broad, tan-coloured. Spores pip-shaped, $9 \times 7 \mu$.

878. Cortinarius (Phlegmacium) lustratus. *Fr. Hym. Eur. 337.*

Lustra'tus = purified. In allusion to its lack of colour.

Whitish. Pileus fleshy, convex, then plane, equal, even, smooth, viscid, margin fibrillose, fringed with the veil; stem solid, stout, nearly equal; gills rounded, very much crowded, unchangeable.—*Cooke Illus. t. 799.*

In heathy places.

****** *Gills from violet or purplish becoming cinnamon.*

879. Cortinarius (Phlegmacium) varius. *Fr. Hym. Eur. 339.*

Var'ius = variable.

Pileus compact, hemispherical, then expanded, even, viscid, discoid; margin smooth; flesh white; stem solid, short, conical, clad with adpressed flocci, whitish; gills emarginate, crowded, quite entire, purplish, at length clay-coloured or cinnamon.—*Cooke Illus. t. 698.*

In woods.

Pileus 2 in. and more broad. Stem $1\frac{1}{2}$ -2 $\frac{1}{2}$ in. long, $\frac{1}{2}$ in. thick above, 1 in. or more below.

880. Cortinarius (Phlegmacium) cyanopus. *Fr. Hym. Eur.*

Cyan'o-pus = with a dark-blue (*κυανος*) foot. From the violet stem.

Pileus fleshy, hemispherical, then expanded, even, viscid; margin thin, smooth, of the same colour; flesh whitish; stem solid, violaceous then whitish, naked above the thin veil; bulb depressed, oblique; gills adnate, then emarginate, broad, rather crowded, violaceous, then pallid.—*Cooke Illus. t. 699. Sow. t. 223.*

881. Cortinarius (Phlegmacium) variicolor. *Fr. Hym. Eur.* 333.

Variicolor = of variable colour.

Pileus compact, convex, then expanded, viscid, discoid, *margin tomentose violet*, stem hard, stout, at *first villose, bluish then becoming whitish*, flesh of the same colour, gills decurrently emarginate, somewhat arcuate, crowded, bluish clay-coloured, then cinnamon.—*Cooke Illus. t.* 700.

In pine woods, &c.

var. nemorensis. *Fr. Hym. Eur.* 333.

Nemorensis = of or belonging to a grove or wood.

Pileus compact, at first smooth, viscid, soon dry, opaque, pilosorivulose, stem clavate, *hollow* and mealy at the apex, gills rounded, rather decurrent.—*Cooke Illus. t.* 863.

In beech woods.

Pileus 4-5 in., bay brown, then yellowish. Stem 3 in. long. Spores $9-10 \times 5 \mu$.

882. Cortinarius (Phlegmacium) largus. *Fr. Hym. Eur.* 339.

Largus = large.

Pileus fleshy, dilated, repand, rather thick, coated with adpressed silky fibrils, slightly viscid, flesh *bluish grey*, then *white*; stem *solid, fibrillose, curved*, violaceous, becoming whitish, pruinose at the apex; gills adnate, emarginate, broad, crowded, quite entire; bluish grey, then clay-coloured, cinnamon.—*Cooke Illus. t.* 701. *Grevillea t.* 103, *f.* 1.

In pine woods.

Pileus 4-6 in. Stem commonly 4-6 in. long. Spores $12-14 \times 7 \mu$.

883. Cortinarius (Phlegmacium) Riederi. *Fr. Hym. Eur.* 339.

Ried'eri, in honour of M. Rieder, of St. Petersburg.

Pileus compact, campanulate, then expanded, even, *glutinous*, shining when dry, flesh watery; stem solid, clavate, *lilac, silky*, and fibrillose; gills adnate, rather thick, eroded, *lilac*, then cinnamon.—*Cooke Illus. t.* 702.

In pine woods.

Stem 4-5 in. long. Pileus 3 in. broad (or less), obtusely umbonate, ochraceous. Spores $12 \times 5 \mu$.

* * Gills yellow, cinnamon, ferruginous.

884. Cortinarius (Phlegmacium) saginus. *Fr. Hym. Eur.*

Saginus = flattened.

Pileus fleshy, plano-convex, unequal, smooth, viscid; stem solid, somewhat bulbous, fibrillose, *becoming yellowish, apex naked*.

cortina fugacious, gills decurrent, broad, eroded, dirty, pallid, then cinnamon.—*Cooke Illus. t. 703. Grevillea t. 92.*

In larch woods.

Gregarious, almost caespitose. Stem 3 in. long, an inch or more thick. Pileus 4-5 in. broad. Yellow. Flesh white. Figures sent to and determined by Fries as a form of this species.

885. Cortinarius (Phlegmacium) russus. *Fr. Hym. Eur. 341.*

Russus = red.

Pileus fleshy, convexo-plane, viscid, margin innately silky-fibrillose; stem somewhat hollow, soft, attenuated, closely fibrillose, pallid, nearly white, veil fugacious; gills adnate, broad, crowded, connected by veins, reddish-ferruginous.—*Cooke Illus. t. 751. Trans. Woolh. Cl. 1870, t. 1.*

In moist woods.

Pileus 4 in. broad, coppery red. Taste nauseous. Spores $8-10 \times 5 \mu$.

*** Gills olivaceous.

886. Cortinarius (Phlegmacium) infractus. *Fr. Hym. Eur. 341.*

Infractus = broken, bent. Referring to the margin of the pileus.

Pileus expanded, even, virgate, viscid, disc compact, growing pale, margin thin, broken, at length revolute, flexuous; stem solid, ovately clavate, adpressedly fibrillose, growing pale, gills adnate, broad, crowded, olivaceous-umber.—*Cooke Illus. t. 704.*

In beech woods.

Spores pip-shaped, $10 \times 8 \mu$.

887. Cortinarius (Phlegmacium) anfractus. *Fr. Hym. Eur. 341.*

Anfractus = broken, bent, recurved.

Pileus fleshy, unequal, and broken, at length undulato-repand, rather viscid, shining when dry; stem stuffed, unequal, closely fibrillose; apex violaceous and veiled; gills arcuato-adfixed, crisped, somewhat distant, dingy olive, then cinnamon.—*Cooke Illus. t. 705.*

In woods.

Thinner than *C. infractus*, usually more irregular.

888. Cortinarius (Phlegmacium) Berkeleyi. *Cooke Illus. t. 706.*

Berk'leyi, in honour of the Rev. M. J. Berkeley, F.R.S.

Large. Pileus convex, then expanded, rather viscid, shining when dry, fleshy, smooth, or radiately silky, margin plicato-sulcate, becoming nearly even when old, the whole fungus at first enclosed

in a whitish volva, which breaks up in patches on the disc; stem thick, swollen at the base, white, densely fibrillose, solid, flesh white; gills scarcely distant, ventricose, slightly emarginate, dingy olive, at length pale cinnamon.—*Cooke Illus. t. 706, 707. Cortinarius anfractus, Berk., not Fries.*

In woods.

Pileus 4-6 in., fuliginous, at first with a tinge of violet at the margin. Stem 6 in. long, 1 in. thick above, nearly twice as thick below. Spores subfusiform, rough, $15 \times 9 \mu$.

†† *Scauri*. Bulb depressed or turbinate, *marginate*, stem fleshy, fibrous, cortina usually inferior, arising from the margin of the bulb. Pileus equally fleshy.

Scauri = with swollen ankles.

* *Gills whitish, then clay-colour or pale cinnamon.*

889. Cortinarius (Phlegmacium) multiformis. *Fr. Hym. Eur. 342.*

Multiformis = of many shapes. *Admodum mutabilis*, very variable (Fries).

Pileus fleshy, convex, then expanded, equal, smooth, viscid; *flesh and fugacious veil white*; stem solid, attenuated, closely fibrillose, naked, white, *then yellowish*; bulb submarginate; gills emarginate, crowded, *serrated*, white, then clay-coloured cinnamon.—*Sow. t. 102. Cooke Illus. t. 708.*

In woods.

Spores $10-12 \times 5 \mu$. Rough.

var. *flavescens*. *Cooke Illus. t. 709.*

890. Cortinarius (Phlegmacium) napus. *Fr. Hym. Eur. 343.*

Napus = a kind of turnip. From the bulbous base.

Pileus fleshy, convex, then plane, smooth, glutinous, *margin broken*; stem solid, equal, smooth, ascending from an obovate, oblique, *marginate* bulb, flesh white; gills emarginate, broad, *rather distant*, crisped, whitish, then dingy.—*Cooke Illus. t. 710.*

In pine woods.

Stem 2 in. long, yellowish at the base. Pileus 2-3 in. broad. Spores smooth, $10 \times 5 \mu$.

891. Cortinarius (Phlegmacium) allutus. *Fr. Hym. Eur. 343.*

Allutus = bathed, washed. From its viscosity.

Pileus fleshy, conically, convex, smooth, viscid, growing pale, *margin darker, flesh rufescent*, stem viscid, white, mealy at the

apex, striate with reddish lines below, marginately bulbous, gills adnate, rather crowded, crenulate, thin, whitish, then rufescent.—*Cooke Illus. t. 752.*

In pine woods.

Small, remarkable for the reddish colour.

892. Cortinarius (Phlegmacium) talus. *Fr. Hym. Eur. 344.*

Talus = the ankle. *Cf.* the name of the subdivision, *Scauri*.

Pileus fleshy, convex, equal, even, smooth, viscid; stem solid, equal, cylindrical, nearly smooth, base marginately bulbous, *as well as the flesh becoming pale*; gills emarginate, rather crowded, ochraceous straw-colour (scarcely discoloured).—*Cooke Illus. t. 711.*

In woods.

Bulb small. Stem 3 in. long, $\frac{1}{2}$ in. thick. Pileus 2 in. broad, or a little more. Spores $8.9 \times 4.5 \mu$.

*** *Gills violet, blue, purplish, at length cinnamon.*

893. Cortinarius (Phlegmacium) glaucopus. *Fr. Hym. Eur. 344.*

Glauc'o-pus = with the foot bluish (*γλαυκός*).

Pileus compact, torn, expanded, subrepand, viscid, then floccoso-squamose or fibrillose, *flesh at length yellowish*; stem solid, stout, striate, bluish, then pale yellowish, margined at the base; gills emarginate, broad, bluish, then clay-coloured cinnamon.—*Cooke Illus. t. 712.*

In pine woods.

Stem 3-4 in. long. Always thick, at first pale blue within. Spores $8 \times 4.5 \mu$;— $9-10 \times 7 \mu$. G.M.

894. Cortinarius (Phlegmacium) calochrous. *Fr. Hym. Eur. 345.*

Calo-chrous = beautifully coloured.

Pileus fleshy, convex, then expanded, smooth, viscid, unchangeable; *flesh compact, white*; stem solid, equal, fibrillose, white, then yellowish; *bulb distinct, margined*; gills emarginate, crowded, serrated, bright blue, then purplish.—*Berk. Outl. t. 12, f. 3. Cooke Illus. t. 713.*

In woods.

Spores $7-8 \times 4 \mu$.

895. Cortinarius (Phlegmacium) cœrulescens. *Fr. Hym. Eur. 345.*

Cœrulescens = becoming or almost azure.

Pileus fleshy, convex, then expanded, even, viscid; *flesh soft*; stem solid, attenuated, naked, *bluish, then whitish*; bulb marginate;

gills adnexed, crowded, quite entire, at first of a pure *dark blue*.—*Cooke Illus. t. 721, 722.*

In woods.

Spores $10-12 \times 5 \mu$.

896. Cortinarius (Phlegmacium) purpurascens. *Fr. Hym. Eur. 345.*

Purpurascens = becoming purple, purplish.

Pileus compact, dilated, subrepand, tiger-spotted, viscid; *flesh everywhere blue*; stem solid, stout, fibrillose; bulb marginate, vanishing; gills broadly emarginate, crowded, bluish, then clay-coloured cinnamon, *purplish when rubbed*.—*Cooke Illus. t. 723, 724.*

In woods.

Pileus often with a raised submarginal zone. Spores $10-12 \times 5-6 \mu$.

897. Cortinarius (Phlegmacium) purpurascens, var. sub-purpurascens. *Fr. Hym. Eur. 346.*

Sub-purpurascens = almost *C. purpurascens*.

Pileus thinner than in the type form, slightly virgate, growing pale; stem stuffed, nearly equal, white, with a bluish tinge; bulb somewhat marginate; gills cinnamon, and, as well as the flesh, becoming purple when bruised.—*Cooke Illus. t. 725.*

On the ground.

* * *Gills ferruginous, tawny, or yellow.*

898. Cortinarius (Phlegmacium) dibaphus. *Fr. Hym. Eur. 346.*

Di-baphus, διβαφος, double-dyed, dyed of two colours.

Pileus fleshy, plano-depressed, smooth, viscid, *variegated*; *flesh yellow, under the cuticle violet*; stem stuffed, fibrillose, shining, yellow, purplish above; bulb marginate; gills adnate, somewhat crowded, quite entire, *ferruginous purple*.—*Saund. & Sm. i. t. 10.*

In woods.

Stem 3 in. long, $\frac{1}{2}$ in. thick. Pileus 3-4 in. broad.

var. **xanthophyllus.** *Cooke Illus. t. 753.*

Xanth'o-phyllus = with yellow leaves, or gills.

Gills at first, and for a long time, yellow.

Spores $12 \times 5 \mu$.

899. Cortinarius (Phlegmacium) turbinatus. *Fr. Hym. Eur. 346.*

Turbina tus = cone-shaped, like a spinning-top, *turbo*. Said of the bulb.

Pileus fleshy, plane, then depressed, even, viscid, *of one colour, smooth, growing pale*; *flesh white*, soft; stem stuffed, sub-equal,

shining, whitish; bulb marginate; gills attenuated, adnate, entire, isabelline, then ferruginous.—*Cooke Illus. t. 714.*

In woods, chiefly of beech.

Spores $14.16 \times 7 \mu$, rough.

900. Cortinarius (Phlegmacium) corrosus. *Fr. Hym. Eur. 347.*

Corrosus = gnawed to pieces. In allusion to the late condition of the pileus.

Pileus fleshy, expanded and umbilicate, smooth, viscid, discoloured, at length *rivulose, subfloccose, opaque when dry, flesh firm, white*, stem nearly hollow, equal, naked and *white* at the apex, cortina fibrillose, white, bulb depressed, marginate, gills emarginate, much crowded, narrow, sub-ferruginous.—*Cooke Illus. t. 715.*

In pine woods.

Pileus 2-3 in. across, ferruginous, then clay-coloured, opaque.

901. Cortinarius (Phlegmacium) fulgens. *Fr. Hym. Eur. 347.*

Fulgens = shining, conspicuous.

Pileus fleshy, plane, equal, *silky-fibrillose, viscid, flesh at length spongy, tan coloured*; stem stout, bulb depressed, marginate, yellow, woolly, filamentose, at length pulverulent, ferruginous; gills emarginate, somewhat tawny.—*Saund. & Sm. t. 12. Cooke Illus. t. 716.*

In pine woods, &c. Sept.

Robust, golden yellow. Pileus 2-3 in. broad. Spores $10 \times 6 \mu$.

902. Cortinarius (Phlegmacium) fulmineus. *Fr. Hym. Eur. 347.*

Fulmineus = bright, shining, like lightning, *fulmen*.

Pileus compact, convex, then plane, viscid, marked with agglutinated scales, shining; stem solid, stout, *yellow, naked, with a white cortinate veil at the apex*; bulb broad, rooting; gills rounded, crowded, at first pure yellow.—*Cooke Illus. t. 717.*

In shady woods.

Spores $10 \times 5.6 \mu$.

903. Cortinarius (Phlegmacium) orichalceus. *Batsch. Consp. f. 184.*

Ori-chal'ceus, from *ὀρεί-χαλκος* = yellow copper ore.

Pileus fleshy, becoming flattened, smooth, with a *viscid pellicle, disc rubiginous, cracking in scales*, margin becoming livid; stem solid, equal, fibrillose, yellowish, with a marginate bulb; gills somewhat adnate, broad, sulphury, becoming greenish.—*Fr. Hym. Eur. 348. Cooke Illus. t. 754.*

Under trees.

Pileus 3 in. broad. Stem 2-3 in. long, $\frac{1}{2}$ in. thick, with a depressed bulb.

*** *Gills olivaceous.*

904. Cortinarius (Phlegmacium) prasinus. *Fr. Hym. Eur.* 348.

Prasinus, πράσινος, of a leek-green; from πράσον = a leek.

Pileus compact, equal, viscid, variegated with scale-like spots; stem solid, short, firm, base marginato-bulbose, pallid greenish, as well as the veil; gills rounded, rather distant, yellow, becoming olive.—*Cooke Illus. t.* 735.

In beech woods.

Spores $10 \times 5 \mu$, smooth.

905. Cortinarius (Phlegmacium) atro-virens. *Kalehb. Icon. Hung. t.* 19, *f.* 3.

Atro-virens = dark green.

Pileus compact, convex, even, viscid, dark-green, or olivaceous umber, flesh greenish-yellow, stem solid, stout, fibrillose, except the subturbinate marginate bulb. Gills adnate, crowded, sulphury then greenish, at length cinnamon.—*Fr. Hym. Eur.* 349. *Cooke Illus. t.* 736.

In pine woods.

Mycelium tawny. Size of *C. orichalceus*, *Fr.* Spores $10 \times 6 \mu$.

906. Cortinarius (Phlegmacium) scaurus. *Fr. Hym. Eur.* 349.

Scaurus = with swollen ankles. *Cfr. C. talus.*

Pileus fleshy, equal, smooth, tiger-spotted, viscid, becoming pale, margin thin, at length somewhat striate; stem solid, spongy at the base, then marginato-bulbose, attenuated, striate, growing pale; gills attenuated, adnate, rather thin, crowded, purplish, then olivaceous.—*Cooke Illus. t.* 755.

In woods.

Stem 3-4 in. long, 3-4 lines thick. Spores $10 \times 5 \mu$.

907. Cortinarius (Phlegmacium) herpeticus. *Fr. Hym. Eur.* 349.

Herpet'icus, έρπετικός, creeping. From the lengthening stem.

Pileus fleshy, equal, somewhat spotted, viscid, disc becoming paler, flesh violet, then whitish; stem stuffed, firm, fibrillose, squalid pallid, base marginate-bulbous; gills somewhat adnate, violet, umber, then dingy olive.—*Cooke Illus. t.* 849.

In woods, &c.

Stem at first short, then 2-3 in., hard, but spongy within. Pileus 3 in. broad. Spores $10 \times 6 \mu$.

††† **ELASTICI.** *Cortina simple, thin, fugacious, medial or inferior.*
Stem from the first exserted, rather thin, never marginately bulbous or peronate, but rigid, *elastic*, externally rather *cartilaginous, polished, shining*, naked at the apex, often becoming hollow. Pileus thin, sometimes hygrophanous.

* *Gills whitish, then clay-coloured or dingy cinnamon.*

908. Cortinarius (Phlegmacium) cumatilis. *Fr. Hym. Eur. 349.*

Cuma'tilis = of the waves, sea-coloured, blue.

Pileus convex, obtuse, even, *tinged violet* with the blue gluten, stem solid, firm, somewhat bulbous, apex a little cortinate, flesh compact, white, *universal veil abruptly volvaceous* at the base, gills adnexed, crowded, serrate, white, then clay-coloured.—*Cooke Illus. t. 726.*

In copses, &c.

909. Cortinarius (Phlegmacium) serarius. *Fr. Hym. Eur. 350.*

Sera'rius = living on whey, *serum*.

Pileus fleshy, convex then plane, gibbous, *unpolished, viscid, opaque*; stem solid, equal, fibrillose, shining, white, flesh white, gills arenately affixed (with a decurrent tooth), crowded, whitish, then clay-coloured.

In woods.

Pileus 3-4 in. broad. Having seen copy of Fries's drawings of this species, we are of opinion that the evidence of its being British is very slender and doubtful. The Scotch specimens, if true, were by no means typical.

910. Cortinarius (Phlegmacium) emollitus. *Fr. Hym. Eur. 350.*

E-molli'tus = softened, soft.

Pileus fleshy, lax, sub-repand, delicately *fibrillose-virgate*, viscid, shining when dry, margin thin, broken, *stem* stuffed, short, unequal, fibrillose, soft, *white: flesh white*; gills emarginate, broad, rather distant, white, then ochraceous.—*Cooke Illus. t. 727.*

In grassy places, in beech woods.

Stem 2 in. long, $\frac{1}{2}$ in. thick. Pileus 3-4 in. Ochraceous yellow.

911. Cortinarius (Phlegmacium) crystallinus. *Fr. Hym. Eur. 350.*

Crystall'inus, κρυστάλλινος, crystalline.

Pileus fleshy, flattened, even, *smooth, viscid, shining, hygrophanous*; *stem* hollow, nearly equal, fragile, fibrillose, whitish; gills emarginate, crowded, clay-coloured.—*Cooke Illus. t. 728.*

In beech woods. Taste acrid.

Stem 3 in. long, 3-4 lines thick. Pileus 3 in. broad, white when dry. Spores $8 \times 4 \mu$.

912. Cortinarius (Phlegmacium) decoloratus. *Fr. Hym. Eur.* 351.

De-colora'tus = deprived of its colour.

Pileus fleshy, thin, expanded, obtuse, viscid, even, *soon dry, floccose, and discoloured*; stem attenuated from the thickened base, fibrillose-striate, *silvery*, naked above; gills emarginate, somewhat crowded, whitish or bluish-grey, then clay-coloured cinnamon.—*Cooke Illus. t.* 729.

In woods.

Stem 3 in. long, $\frac{1}{2}$ in. thick. Pileus 2-4 in. broad, clay-coloured. Gills 3-4 lines broad. Spores $7 \times 3-4 \mu$.

**** Gills violet, purplish, or flesh-coloured.**

913. Cortinarius (Phlegmacium) decolorans. *Fr. Hym. Eur.* 351.

De-color'ans = becoming deprived of its colour. From the gills soon losing their purple.

Pileus fleshy, equal, flattened, even, smooth, viscid, of one colour; stem stuffed, elongated, attenuated, smooth, naked above the median somewhat persistent ring; *white, flesh white*; gills affixed, thin, *without juice*, purplish, soon cinnamon.—*Cooke Illus. t.* 730.

In pine woods.

Spores $8 \times 5 \mu$, pip-shaped; $10 \times 8 \mu$. G.M.

914. Cortinarius (Phlegmacium) porphyropus. *Fr. Hym. Eur.* 351.

Porphyr'o-pus = with a purple foot. From the pale stem becoming lilac when touched (Fries, *l.c.*).

Pileus fleshy, thin, even, virgate, viscid; stem stuffed, then hollow, thin, *somewhat attenuated, flesh purplish when broken*; gills emarginate, crowded, thin, violaceous-purple, at length cinnamon.—*Cooke Illus. t.* 731.

In woods.

Stem 2-4 in. long, 3 lin. thick, fragile, externally and internally violaceous, growing pale, then whitish. Pileus $1\frac{1}{2}$ -3 in. broad, livid yellowish or clay-coloured. Spores $10-12 \times 7 \mu$.

915. Cortinarius (Phlegmacium) croceo-cæruleus. *Fr. Hym. Eur.* 352. *Pers. Ic. Desc. t.* 1, *f.* 2.

Croc'eo-cærul'eus = saffron-yellow and azure. From the change in colour which the gills undergo.

Pileus fleshy, thin, convex then plane, even, viscid, *lilaceous*; stem hollow, *fragile*, equal, smooth, whitish; gills emarginate, with a decurrent tooth, rather distant, lilac, then clay-coloured, or saffron-yellow.—*Cooke Illus. t.* 732.

In beech wood.

Small, flesh watery, unchangeable. Spores $8 \times 5 \mu$.

* * * *Gills pure ochraceous, tawny, or ferruginous.*

916. Cortinarius (Phlegmacium) coruscans. *Fr. Hym. Eur.* 352.

Coruscans = flashing, glittering. Perhaps from the lightning-like colour of the pileus.

Pileus fleshy, plane, viscid, even, smooth, stem solid, elastic, equal, fibrillose striate, white; gills *plano-decurrent*, thin, much crowded, ochraceous.—*Cooke Illus. t.* 733.

In copses.

917. Cortinarius (Phlegmacium) papulosus. *Fr. Hym. Eur.* 352.

Papulo'sus = full of pimples. *papulæ*.

Pileus fleshy, plane, smooth, discoid, soon *reticulate*, granulate punctate; stem stuffed, rigid, fragile, fibrillose, externally and internally white, naked above the fugacious ring, gills adnate, decurrent, crowded, joined behind, pallid, then yellowish cinnamon.—*Cooke Illus. t.* 718.

In woods.

Stem 3 in. long, $\frac{1}{2}$ in. thick. Pileus about 3 in. broad.

Tribe 2. *Myxaci*um. *Fr. Epicr.* p. 273.

Myxa'cium, from $\mu\upsilon\chi\alpha$ = mucus, slime; from the glutinous veil.

Universal veil glutinous, hence the stem also viscid, scarcely bulbous. Pileus fleshy, rather thin, gills adnate, decurrent.

† **COLLINITI.** Stem floccosely sheathed, flocci at first covered with gluten.

918. Cortinarius (Myxaci) arvinaceus. *Fr. Hym. Eur.* 354.

Arvinaceus, from *arrina* = grease.

Pileus fleshy, soft, becoming plane, smooth, viscid, margin spreading; stem tall, cylindrical, *silky-viscid*, white, then yellowish; gills adnate, decurrent, broad, even, *straw-coloured*, then ochraceous.—*Cooke Illus. t.* 737.

In beech woods.

Pileus 3-4 in. Stem 4-5 in. long, $\frac{1}{2}$ in. thick. Gills $\frac{1}{2}$ - $\frac{3}{4}$ in. broad.

919. Cortinarius (Myxaci) collinitus. *Fr. Hym. Eur.* 354.

Collinitus = besmeared.

Pileus *fleshy*, convex, then expanded, obtuse, even, glutinous, shining; stem firm, cylindrical, *transversely squamose* from the breaking up of the glutinous floccose veil; gills adnate, clay-coloured, or grey, then cinnamon.—*Sow. t.* 9. *Cooke Illus. t.* 738.

In woods.

A variable species. Spores $12 \times 6 \mu$.

var. **mucosus**. *Fr. l.c.*

Muco'sus = full of mucus.

Firmer, stem even, silky ; gills *whitish* then ferruginous.—*Cooke Illus. t. 739.*

In pine woods.

Pileus 2-4 in. broad. Stem 2-3 in. long, $\frac{1}{2}$ -1 in. thick. Gills 3-6 lines broad.

920. Cortinarius (Myxacium) mucifluus. *Fr. Hym. Eur. 355.*

Muci'fluus = flowing with mucus.

Pileus rather fleshy, campanulate, then expanded, *covered with an evanescent hyaline glutin, margin striate* ; stem attenuated downwards, soft, viscid from the fugacious floccose squamose veil ; gills adnate, distinct, clay-colour ; then watery cinnamon.—*Fr. Icon. t. 148, fig. 1. Cooke Illus. t. 740.*

On the ground.

"Allied to *C. collinitus*, and for a long time united with it as a variety, but apparently quite distinct. It differs (1) in the spongy stem, attenuated downwards, white ; (2) pileus thinner, campanulate, then expanded, at length reflexed and repand, membranaceous, margin striate ; (3) colour of the pileus livid, clay-colour, when dry of an opaque tan colour ; (4) gluten of the pileus thin, hyaline, diffuent, not forming a thick persistent bright-coloured pellicle ; (5) odour sweet. Gills clay-coloured, then cinnamon. No violet in the whole fungus."—*Fr. Mon. II., 37.*

Spores granular, $12 \times 7 \mu$.

921. Cortinarius (Myxacium) elatior. *Fr. Hym. Eur. 355.*

Elatior = rather tall.

Pileus cylindrical, then expanded, viscid, disc rather fleshy, even, otherwise membranaceous, and *plicato-rugose* ; stem elongated, soft, stout, attenuated at either end, squamose from the torn veil ; gills adnate, broad, connected by veins, and rugose, brownish, ferruginous.—*Cooke Illus. t. 741, 742.*

In woods. Common.

Pileus 3-4 in. broad. Stem 5-7 in. long, $\frac{1}{2}$ in. and more thick. Spores $12 \times 6 \mu$.

922. Cortinarius (Myxacium) grallipes. *Fr. Hym. Eur. 355.*

Grall'ipes = with stem (*pes*) long, like stilts (*grallae*).

Pileus between fleshy and membranaceous, campanulate, then expanded, umbonate, viscid, *even, hygrophanous*, stem stuffed, then *hollow*, slender, rather flexuous, fibrous, viscid, growing yellowish, gills adnate-decurrent, distinct, very broad, rather ferruginous.—*Cooke Illus. t. 734. Cortinarius elatior, Saund. & Sm. t. 27.*

Under poplars and oak.

Stem 3-5 in. long, 2-3 lines thick. Pileus 3 in. broad, tawny when moist, ochraceous when dry. Gills half-an-inch broad behind.

923. Cortinarius (Myxacium) livido-ochraceus. Berk. Outl. p. 187.

Livido-ochraceus livid ochre in colour.

Pileus plane, *submembranaceous*, viscid, margin not striate; stem attenuated at either end, subsquamose, striate above the fugitive veil, stuffed with cottony fibres; gills cinnamon, sub-adnexed, broad in front.—Fr. Hym. Eur. 356. Cooke Illus. t. 767.

In woods.

Small. Pileus about 1 in. broad. Spores $8-10 \times 5-7 \mu$, rough in original specimens in Berkeley's Herbarium. The large size given in some books for the spores of this species must be an error.

†† DELIBUTI. Veil entirely viscid, hence the stem not floccosely sheathed, but varnished when dry.

* Gills whitish, then clay-coloured.

(No British species.)

** Gills at first violet, blue, or reddish.

924. Cortinarius (Myxacium) salor, Fr. Hym. Eur. p. 357.

Salor = the colour of the sea, sea-blue; *salum* = the sea.

Pileus conico-campanulate, viscid, then expanded; disc compact, gibbous; margin thin, fibrillose, violet; stem solid, *bulbous*, *conically attenuated*, smooth, with the *glutinous blue veil adhering at the apex*; gills adnate, rather distant, quite entire, grey, then clay-coloured, with a violet edge.—Cooke Illus. t. 768.

On the ground.

Spores $8-10 \times 6 \mu$. A singular form with the base strangely swollen is figured B on the plate.

925. Cortinarius (Myxacium) delibutus. Fr. Hym. Eur. 357.

Delibutus = besmeared.

Pileus fleshy, thin, convex, then plane, obtuse, even, whitish; stem stuffed, elastic, *thin, attenuated, glutinous, whitish*; gills adnate, rather distant, serrulate, pallid blue, then ferruginous clay-colour.—Cooke Illus. t. 743.

In grassy places.

Stem 2-4 in. long, 3-4 lines thick. Pileus 2-3 in. broad, yellow, sometimes with the disc tawny.

926. Cortinarius (Myxacium) illibatus. Fr. Hym. Eur. p. 358.

Illibatus = unimpaired; perhaps from the *entire* gills.

Pileus fleshy, thin, campanulate, then convex, pelliculose; stem hollow, soft, thin, white, smooth, viscid; gills adnate, decurrent, arcuate, *crowded, flesh-coloured*, then clay-coloured, cinnamon.

In pine woods.

Stem 3 in. long, 2 lines thick. Pileus 1-2 in. broad, yellowish, with the disc darker. Spores $15-18 \times 5-7 \mu$, granular, from specimen in Herb. Berkeley.

* * * *Gills at first ochraceous or cinnamon.*

927. Cortinarius (Myxadium) stillatitius. *Fr. Hym. Eur. 358.*

Stillatitius dripping.

Pileus thin, convexo-plane, subumbonate, even; *stem hollow, very soft*, equally attenuated, at first *covered with a blue gluten*; gills emarginate, somewhat distant, broad, ferruginous cinnamon.—*Saund. & Sm. t. 3. Cooke Illus. t. 831.*

In mossy places.

Pileus about 2 in. broad. Stem 3 in. long, 2 lines thick, incrassated at the base. Spores $8 \times 4 \mu$.

928. Cortinarius (Myxadium) vibratilis. *Fr. Hym. Eur. 358.*

Vibratilis = quivering, tremulous.

Pileus fleshy, thin, nearly plane (or gibbous), even, smooth, viscid, shining, hygrophanous; stem stuffed, *soft, conically attenuated, snowy white*, glutinous veil fugacious; gills somewhat adnate, then decurrent, thin, crowded, pallid ochraceous, then cinnamon.—*Cooke Illus. t. 744.*

In woods.

Odour and taste disagreeable. Spores 8×5 .

929. Cortinarius (Myxadium) pluvius. *Fr. Hym. Eur. 359.*

Pluvius = rainy; hygrophanous.

Pileus rather fleshy, globose, then convex, smooth, viscid, hygrophanous; stem stuffed, then hollow, *slender, nearly equal, soft, white, becoming pallid*; gills decurrent, then seceding, white, then ochraceous.—*Cooke Illus. t. 769.*

In woods.

Pileus $\frac{1}{2}$ -1 in. Stem sometimes short, sometimes 3 in. long, 2-3 lines thick. Gills at length free, pallid. Spores granular, $10 \times 8 \mu$.

Tribe 3. Inoloma. *Fr. Epicr. p. 278.*

Inoloma, from *ἵς*, genitiv. *ivós*, a fibre; and *λαμᾶ* = a fringe.

Pileus equally fleshy, dry, at first silky with innate fibrils or scales, flesh continuous, not hygrophanous. Veil simple, stem fleshy, somewhat bulbous.

* *Gills at first white or pallid.*

930. Cortinarius (Inoloma) argentatus. *Fr. Hym. Eur. 360.*

Argentatus = silvered.

Pileus fleshy, convex, becoming smooth, shining silvery-grey, disc rather gibbous, becoming pallid, *about the margin at first silky-lilac*, then growing whitish; stem stout, white, of the same

colour within; gills emarginate, crowded, serrate, pale, then watery cinnamon.—*Cooke Illus. t. 745.*

In woods.

Pileus as much as 4 in. broad. Stem 4 in. long, or abbreviated. A smaller and more slender form is found in pine woods. Spores $8 \times 5 \mu$.

var. **pinetorum.** *Cooke Illus. t. 746.*

Pinetorum = of pine woods, *pinēta*.

Smaller and more graceful.

In pine woods.

****** *Gills, with the stem and veil becoming violet.*

931. Cortinarius (Inoloma) violaceus (Linn.). *Fr. Hym. Eur. 360.*

Violaceus = like a violet in colour.

Dark violet; pileus fleshy, obtuse, *villososquamosa*; stem bulbous, spongy, villous, internally cinereous violet; gills fixed, broad, thick, *distant*, darker.—*Huss. i. t. 12. Hogg & Johnst. t. 6. Cooke Illus. t. 770.*

In woods. Esulent.

A fine species. Pileus 3-6 in. broad. Stem 3-4 in. long. Colour, within and without, always dark blue violet. Spores $12-14 \times 10 \mu$.

932. Cortinarius (Inoloma) cyanites. *Fr. Hym. Eur. 360.*

Cyanites, *κυανίτης*, dark blue.

Pileus fleshy, obtuse, silky, becoming smooth, pallid blue; stem bulbous, smooth, blue, *containing a blood-red juice*; gills rounded, rather crowded, at first bright steel blue.

In woods.

Pileus 3-5 in. broad. Stem 3-5 in. long; $\frac{1}{2}-\frac{3}{4}$ in. thick at the apex. Spores $10 \times 5-6 \mu$.

933. Cortinarius (Inoloma) muricinus. *Fr. Hym. Eur. 361.*

Muricinus = like the purple-fish, *murex*; purple.

Pileus compact, obtuse, becoming smooth, *violaceous then reddish*; margin fibrillose; stem bulbous, without juice, villous, purplish violet, as well as the emarginate, rather crowded, gills.—*Cooke Illus. t. 815.*

In larch woods.

Stem stout, pileus 3-4 in. broad, gills $\frac{1}{2}$ in. broad, at length reddish liver coloured. Odour peculiar. Flesh blue, becoming whitish. Spores $8-9 \times 4-5 \mu$.

934. Cortinarius (Inoloma) alboviolaceus. *Pers. Syn. 279.*

Albo-violaceus = whitish violet.

Pileus fleshy, *silky* with innate fibrils, at length broadly gibbous, violet, becoming whitish, stem clavate, with a median zone of the

same colour as the pileus. Gills adnexed, rather distant, serrulate, at first *cinereous violet*.—*Fr. Hym. Eur.* 361. *Cooke Illus. t.* 747.

In shady woods.

Pileus 2-3 in. broad. Stem 2 in. long, $\frac{1}{2}$ -1 in. thick. Flesh watery, bluish white. Spores $12 \times 5-6 \mu$.

935. Cortinarius (Inoloma) malachius. *Fr. Hym. Eur.* 361.

Malachius, from $\mu\alpha\lambda\acute{\alpha}\chi\eta$ = mallow ; mauve.

Pileus rather compact, obtuse, pallid lilac, soon discoloured, becoming smooth, at first clad with white fibrils, stem bulbous, with a bluish veil, internally and the veil becoming whitish, gills emarginate, *crowded, pallid purplish*, then watery ferruginous.—*Cooke Illus. t.* 756.

In fir woods.

Flesh of the stem soft, often contorted and ventricose, 3-4 inches long and an inch thick. Pileus 2 in. broad, lilac, then tawny ferruginous or when dry of a brick red, becoming pale, hoary with a whitish pubescence, or silky at the margin. Spores $10-12 \times 6-7 \mu$.

936. Cortinarius (Inoloma) camphoratus. *Fr. Hym. Eur.* 362.

Camphoratus = smelling like camphor. (Rather, like fennugreek, curry-powder, to me.—H. T. W.)

Pileus fleshy, obtuse, lilac, silky, then smooth and discoloured ; stem bulbous, dry ; *base white within*, becoming bluish as well as the veil ; gills thin, crowded, *bright cerulean*, then purplish.—*Cooke Illus. t.* 771.

On the ground in woods. Sept.

Flesh blue. Odour very distinct. Spores subamygdaloid, granular, $12-14 \times 7-8 \mu$.

937. Cortinarius (Inoloma) hircinus. *Bolt. Fungi t.* 52.

Hircinus = having a goatish smell ; *hircus* = a he-goat.

Pileus fleshy, obtuse or gibbous, *silky* with adpressed *violet* fibrils, growing paler, disc smooth, becoming ferruginous ; stem bulbous, without juice, cortinate, pallid violet, *yellowish at the base* and within ; gills emarginate, rather distant, broad, entire, violet, then cinnamon.—*Fr. Hym. Eur.* 362.

In fir woods. Very foetid.

As a British species this rests entirely upon Bolton's figure, and is therefore doubtful.

* * * *Gills or veil cinnamon, red, or ochre.*

938. Cortinarius (Inoloma) traganus. *Fr. Hym. Eur.* 362.

Traganus, from $\tau\rho\acute{\alpha}\gamma\omicron\varsigma$ = a he-goat ; from the smell.

Pileus fleshy, obtuse, fibrillose *with lilac fibrils*, then becoming smooth and discoloured ; stem bulbous, spongy, *violaceous white*,

saffron yellow within; gills emarginate, thick, crenate, distant, at first ochraceous saffron colour.—*Cooke Illus. t. 757.*

In pine woods.

Taste strong, not unpleasant, odour very powerful, like that of the larva of the goat-moth (*Cossus*). Spores $10 \times 6 \mu$. Pileus about 3 in. broad. Stem 3-5 in. long, $\frac{1}{2}$ -1 in. thick above, 1-2 in. thick below.

var. *finitimus*. *Weinm. p. 155.*

Finitimus = adjoining, nearly related.

Smell not at all that of the typical form, but pleasant though peculiar, resembling that of gum just beginning to ferment. Pileus silky, at length smooth, lilac, as is the stem, which is yellowish and mottled within, but not saffron-coloured nor brown.—*B. & Br.*

939. Cortinarius (Inoloma) tophaceus. *Fr. Hym. Eur. 363.*

Tuphaeus = of the colour of tufa, an earthy volcanic rock.

Pileus fleshy, obtuse, tawny ochre, villose-squamose, flesh white. Stem bulbous, villose-squamose, becoming yellow as well as the fibrillose veil. Gills emarginate, distant, tawny cinnamon.—*Cooke Illus. t. 772*

In beech woods.

Subcaespitose. Pileus about 3 inches. Whole plant of a golden yellow. Spores $8-10 \times 5$.

940. Cortinarius (Inoloma) redimitus. *Fr. Hym. Eur. 363.*

Redimitus = wreathed round; i.e., with adpressed fibrils.

Pileus fleshy, rather thin, at length broadly gibbous, golden-yellow, variegated with darker adpressed fibrils; stem fibrillose-striate, slightly thickened at the base; gills emarginate, distant, tawny cinnamon.—*Cooke Illus. t. 773.*

In woods.

Stem 1-2 in. long, slightly thickened at the base and yellowish. Fries regards this as a sub-species of *C. tophaceus*. Spores $10 \times 5 \mu$.

941. Cortinarius (Inoloma) callisteus. *Fr. Hym. Eur. 363.*

Callisteus, from κάλλιστος = most beautiful.

Yellowish tawny; pileus fleshy, convex, then plane, rather smooth, even, and innato-squamulose; margin rather silky; flesh yellowish-white; stem elongated, bulbous, tawny fibrillose; gills adnate, floccose, connected behind.—*Saund. & Sm. t. 3* (too dark).—*Cooke Illus. t. 774, 864.*

In woods.

Stem 3-4 in. long, attenuated upwards from the soft clavate base. Pileus 2 in. broad. Spores $10 \times 7 \mu$.

942. Cortinarius (Inoloma) Bulliardii. *Fr. Hym. Eur.* 363.

Bulliard'i, in honour of the French Mycologist, Bulliard.

Pileus fleshy, campanulato-convex, sub-gibbous, even or squamulose, rufescent; stem bulbous, short, firm, *vermilion below, with fibrils of the same colour*, apex whitish; gills adnexed, broad, purplish, then ferruginous.—*Bull t.* 431, *f.* 3. *Cooke Illus. t.* 758.

In woods. Sept.

Strong scented. Pileus 2 in. broad, flesh whitish, reddish at the base of the stem. Spores $8-10 \times 6 \mu$.

943. Cortinarius (Inoloma) vinosus. *Cooke.*

Vino'sus = like red wine in colour.

Pileus semiglobose, then expanded, at length flattened, *vinous red*, smooth, even, shining, stem cylindrical, *violet*, thickened abruptly into a marginate, bulbous, reddish base, flesh of the pileus, paler violet, as well as the upper part of the stem, reddish below, gills adnexed, ventricose, scarcely crowded, ferruginous cinnamon.—*Cooke Illus. t.* 759.

Under trees.

Pileus 2-3 in. diam. Stem 2-3 in. long, half-an-inch thick. Cortina reddish. Spores $16-18 \times 8 \mu$, almond shaped, granular.

944. Cortinarius (Inoloma) bolaris. *Pers. Ic. Piet. t.* 14, *f.* 1.

Bola'ris, a Latin adjection from *bolare* = to mark, from its red markings; or, less likely, from the mediæval *bola* = a billiard ball. Clearly not from $\beta\omega\lambda\omicron\varsigma$ = a clod, because the termination is Latin, and clods are not generally connected with brilliant coloration.

Pileus fleshy, obsoletely umbonate, growing pale, variegated with *saffron-red, adpressed, innate, pilose scales*; stem stuffed, then hollow, nearly equal, squamose, of the same colour; gills subdecurrent, crowded, watery cinnamon.—*Fr. Hym. Eur.* 364. *Berk. Outl. t.* 19, *f.* 1. *Cooke Illus. t.* 760.

In beech woods. Sept. and Oct.

Pileus 1-2 in. broad. Stem 2-3 in. long, 3-5 lines thick. Spores $6 \times 3-4 \mu$.

** Gills or veil dark, dingy, or olive.

945. Cortinarius (Inoloma) pholideus. *Fr. Hym. Eur.* 364.

Pholid'eus, from $\phi\omicron\lambda\acute{\iota}\varsigma$, genitive $\phi\omicron\lambda\acute{\iota}\delta\omicron\varsigma$, a scale; scaly.

Pileus fleshy, expanded, obtuse, umbonate, fawn-coloured, densely squamulose *with innate, blackish, fasciculated hairs*; stem attenuated, transversely squarrose with sooty-brown scales, even and violet above the veil; gills sub-emarginate, crowded, *violet* then clay-coloured cinnamon.—*Cooke Illus. t.* 761.

In woods.

Pileus 2-4 in. broad. Stem 3-4 in. long, 3-6 lines thick. Pileus and stem squarrose. Spores $8-9 \times 4-5 \mu$.

946. Cortinarius (Inoloma) sublanatus. *Sow. Fun. t. 224.*

Sublana'tus = rather woolly.

Pileus fleshy, campanulate, then expanded, umbonate, tan-coloured, inclining to brown, clothed with *innate, pilose scales*; stem bulbous, attenuated, smooth above, pallid, squamose below with *brownish down*; gills sub-adnate, scarcely crowded, yellowish-olivaceous.—*Fr. Hym. Eur. 364. Huss. ii. t. 22. Cooke Illus. t. 762.*

In woods. Oct.

Pileus 3-4 in. broad. Stem 3 in. long, 1 in. thick at the base. Odour of radishes. Spores almond shaped, granular, $14-16 \times 8-9 \mu$.

947. Cortinarius (Inoloma) phrygianus. *Fr. Hym. Eur. 365.*

Phrygia'nus, from *phrygio* = an embroiderer in gold; from the coloration.

Pileus fleshy, obtuse, honey-colour, *hispid with dense black simple fibrils*, stem bulbous, reticulated with lax black fibrils, gills rounded, rather crowded, dirty yellow.

In shady, moist places, under beech.

With the habit of *Agaricus melleus*. Odour of radishes. Pileus 2-3 in. broad.

948. Cortinarius (Inoloma) arenatus. *Pers. Syn. 293.*

Arena'tus = sanded; from the diagnostic peculiarity of the pileus.

Pileus fleshy, convex, at first gibbous, *granulated with floccose scales, light red, then brownish*; stem clavato-attenuated, beyond the middle clad with brown scales, apex even, pallid; gills emarginate, ventricose, rather crowded, yellowish-cinnamon.—*Huss. i. t. 72. Fr. Hym. Eur. 365. Cooke Illus. t. 763.*

In woods.

Gills never violet. Spores ovate, 7×5 to $10 \times 8 \mu$.

949. Cortinarius (Inoloma) penicillatus. *Fr. Hym. Eur. 365.*

Penicilla'tus = pencilled.

Pileus rather fleshy, convex, umbonate, ferruginous brown, *floccose with dense innate scales*; stem stuffed, slender, equal, clad with *adpressed ferruginous brown scales*; gills adnate, seceding, rather crowded, dark brown.—*Cooke Illus. t. 764.*

In pine woods.

Stem 2-3 inches long, 2-3 lines thick. Pileus 1 inch or more broad.

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